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EDUCATION FOR OCCUPATIONS, GRASS ROOTS THOUGHTS AND BELIEFS IN NEW YORK STATE: A SUMMARY OF THE MULTICOUNTY AREA STUDIES.

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Information from (1) questionnaires completed by present and former students, parents, educators, and business men, (2) government agency reports, (3) school records, and (4) agricultural employer surveys in 24 geographic areas which included all the counties (1) determined the need for additional occupational training, (2) identified major occupational education courses in terms of employer needs, (3) determined interest in types of trainings and work situations, (4) measured the adequacy of present facilities and (5) judged the extent of community support for an increased statewide program of occupational education. The findings and conclusions are summarized in the form of answers to questions formulated from the basic objectives in the area studies. Some of the findings were: (1) Schools should provide vocational and technical education for all who could benefit from it, (2) There are neither enough schools providing adult education, nor typical high school experience adequate for preparing the average person to enter the job market, (3) Most employers want students to have training to develop good attitudes, effective speaking and writing, and occupational skills, and (4) Communities will support an increase in public occupational education. (MM)

EDUCATION FOR OCCUPATIONS

GRASS ROOTS THOUGHTS AND BELIEFS IN NEW YORK STATE

A SUMMARY OF THE MULTICOUNTY AREA STUDIES

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THE UNIVERSITY OF THE STATE OF NEW YORK/THE STATE EDUCATION DEPARTMENT
BUREAU OF OCCUPATIONAL RESEARCH 1967

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EDUCATION FOR OCCUPATIONS

Grass Roots Thoughts and Beliefs in New York State
A Summary of the Multicounty Area Studies

The University of the State of New York
The State Education Department
Bureau of Occupational Education Research

1967

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PREFACE

This report is intended as a summary of the local area studies in occupational education. It was prepared at the direction of Dr. Joseph R. Strobel, former Assistant Commissioner for Occupational Education and Manpower Resources, New York State Education Department.

The writers wish to acknowledge the general assistance of the Division of Occupational Program Planning; Dr. Robert S. Seckendorf, Acting Assistant Commissioner for Occupational Education; and Mr. Everett C. Lattimer, Supervisor of the Division of Occupational Education Supervision. They are appreciative of the informal assistance given on a consultative basis by Dr. Nelson J. Murbach, Chief of the Bureau of Trade and Technical Education, Division of Industrial Education and the earlier work of Dr. Carl J. Anderwald, Associate in Industrial Education in the Bureau of Trade and Technical Education. Further, acknowledgment is made of the work of Dr. C. Thomas Olivo, Director of General Occupational Education II, who developed the statewide coordinated plan for the multi-county studies, formed all of the policy committees, provided assistance in the conduct of each study and worked toward their early implementation.

Much of the material for the report was originated on the local level. It is essential to point out that it was only with the combined contributions of over 1,500 local school administrators, numerous local advisory groups, labor and management organizations, and the hundreds of thousands of individual parents and students that the 24 area studies were successfully brought to a culmination.

The plan of development of this summary, its organization and writing was conducted in the Bureau of School and Cultural Research, Office of Research and Evaluation by Mr. Stanley W. Keiserman and Mr. Peter T. Harkness, Research Consultants, under the immediate supervision of Dr. Alan G. Robertson, Associate in Education Research-Vocational Education at the time of the study and presently Chief of the Bureau of Occupational Education Research.

It is the hope and expectation of the State Education Department that this report will present a clearer picture of the statewide interest and needs of the people of the State of New York--both youth and adults--in education for the occupations.

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FINDINGS

AND

CONCLUSIONS

FINDINGS AND CONCLUSIONS

The findings and conclusions of this report are summarized in the form of answers to questions formulated from the basic objectives found in the geographic area studies:

1. Determine the extent of need for additional occupational education and training in New York State
2. Identify major occupational education courses in terms of present and future needs of employers
3. Determine student, out-of-school youth, and parental interest in types of training and work situations
4. Measure the adequacy of present facilities
5. Judge the extent of popular community support for an increased statewide program of occupational education.

Q. Is there a need for additional occupational education and training in New York State?

A. Yes. Ample quantitative as well as illustrative data confirm this need within regional-multicounty survey areas. There is a general need for more trained personnel to maintain and enhance our society. Since the most important resource of New York State is its trained personnel, specifically its vocational-technically educated men and women, the future prosperity of the State depends in large measure upon its ability to train these people to perform the necessary skills which will be needed of them. Consequently, it is imperative that more occupational education and training be made available in high schools with curriculums designed to meet student and employment needs. (See chapters V, IX, XII and XVI)

Q. For whom should the schools provide vocational and technical education?

A. Persons who are employed but wish to continue learning in order to upgrade themselves; those who are insecure in their present positions who either need to increase their present skills or develop new ones; those who are unemployed and therefore need to acquire skills to become employable; those persons who because their jobs are changing must keep abreast of latest developments; those persons who wish to advance and are presently limited in obtaining increased or new skills and knowledge in their present position; and, of course, those who need to be initially introduced to the job market. In today's complex society almost every individual needs specific occupational preparation. And since conditions are forever changing, forcing many a job change for most workers, it may be said that occupational education must be given continuously throughout a worker's life. (See chapters VIII, IX, X, XII and XIII)

Q. What are the statewide population and school enrollment trends?

A. Total population for New York State will continue to grow as well as the population in most counties. School enrollment will show an even greater rate of growth because of the virtual population explosion at the teenage and pre-teenage levels. However, there is considerable variation in both enrollment size and rate of population growth among the various regions and counties. (See chapter V)

Q. Are student and adult populations in the regional area large enough to warrant expanded vocational-technical education programs now and in the future?

A. Yes. The population figures show steady growth since 1940. The greatest increase in population, however, will be in the under-eighteen-year age group and in the young adult category. (See chapters V and XII)

Q. Are there a sufficient number of schools offering adequate preparation for present day employment to adults who have skill potential but lack proper training?

A. No. The pre-employment preparation of adults is exceedingly limited, except for recent manpower development and training programs. With certain exceptions many courses offered are avocational in nature and do not qualify as vocational-technical training. (See chapters VIII and XII)

Q. Has the typical high school experience in the past been effective and adequate in preparing the average person to enter the job market?

A. Survey participants (students, graduates and industrial spokesmen) feel that specialized high school education and training in the past has been inadequate in preparing people to enter the job market. There needs to be increased emphasis upon the teaching of a marketable skill and related technical content. (See chapters VI, VII, VIII, IX, XII and XVI)

Q. What types of private education programs could promote occupational training?

A. Industrial apprenticeship and cooperative programs in conjunction with public schools, on-the-job training within industry, and private technical-vocational school training programs.

Q. What provisions does industry make for occupational training?

A. Some industrial concerns engage in cooperative work programs with schools; some have their own training facilities and provide for apprenticeship classes. Still others simply provide for on-the-job training. (See chapter XI)

Q. What kind of occupational training do most employers want students to have?

A. Fundamental training that will develop good attitudes in young people toward the world of work; special training in effective speaking and writing, and particularized training in the occupational skills needed for the job in question. (See chapter X)

Q. What will be the future job market in New York State?

A. The county surveys base their findings on Federal, State, and local studies of population trends and local industry's forecast of labor needs. They feel that there will be continued growth in most occupational fields in New York State for the next five to ten years. (See chapter IX)

Q. Will communities support an increase in public occupational education?

A. Yes. A substantial majority of the persons in the survey said "yes." There was some qualification in the use of property taxes as a means of support, but the majority favored it. On the whole, the cooperative attitude of parents, individual citizens, industry, labor, management, and civic organizations in undergoing this study and their responses indicated a positive attitude in favor of area vocational-technical programs. (See chapter XII)

Q. Do local businesses, industries and agricultural enterprises in the multicounty study area desire vocational-technical training programs for their areas?

A. Yes. The facts obtained from the individual survey areas show that a majority of employers would desire an occupational training program and that many would support it too. Training needs in various areas of employment were noted in some of the surveys and particular courses were often suggested as ways to meet these needs. (See chapters X and XII)

Q. Why do students drop out of school?

A. Various reasons have been proposed--the most frequently mentioned include the following: low reading ability, consistent failure to perform regular schoolwork, irregular attendance, frequent change of schools, and low family income. Related factors include: antagonism to school and teachers, little active interest in school curriculum or students, lack of a sense of personal goals and poor overall discipline. (See chapter XIV)

Q. Are there adequate vocational offerings for the slow learner and other disadvantaged persons who will have trouble developing marketable skills?

A. No. At present, there are not enough courses, instructors, or special programs of vocational education that can stimulate the interest of those with limited talents, including many potential dropouts, in order to prepare them for useful employment. Practical arts programs, agriculture, business, home economics and industiral arts whose purpose is generally exploratory and offered in many high schools may help since they provide some useful training, but generally such programs do not provide for the occupational preparation needs of many students. (See chapter XV)

Q. Should area occupational centers be set up?

A. Although some high schools are meeting some of the technical-vocational education demands in an area, most schools and school districts are unable, because of small size and limited finances, to properly train people. Since occupational skills now require a vast amount and range of special training and since much of this training would be inordinately expensive for many small school districts, vocational,industrial and technical courses should be given at the secondary and adult levels in area centers of technology and education. The individual surveys unanimously agree that new area complexes are required. Many counties cite precise locations and even curriculums which are thought necessary. (See chapter XVI)

Q. Would transportation present a problem in setting up area occupational centers?

A. No. Parents as a whole expressed willingness for their children to travel up to 25 miles in order to participate in a quality vocational-technical training program. (See chapters XII and XVI)

Q. What geographic areas would best serve as occupational centers?

A. Certain surveys cite specific geographic areas. However, it was not the prime purpose of the area studies to indicate a specific location for any particular vocational-technical area schools. Consequently, specific sites are not identified in these general conclusions. (See chapter XVI)

RECOMMENDATIONS--NEXT STEPS TO BE TAKEN

We need to share services. Some of New York State's school districts have had considerable experience in the sharing of programs. For over 18 years, boards of cooperative educational services have been providing such services in varying degrees. In 1965-66, 70 such boards were in operation. In order for a cooperative board to have the population base and the resources to provide essential services for all students, further consolidation of BOCES is necessary. It is estimated that a total of 45 area arrangements would insure adequacy for each area (exclusive of the Big Six Cities).

Area centers of cooperative educational services (ACCES) need to be established in judiciously located regions to serve wide areas of population. These centers would come into being as follows:

1. A majority of local school districts' board members petition the Commissioner to lay out an adequate area.
2. After this, these board members in the area to be served call a meeting to authorize the area center to be established, and, following this, an area center school board is elected. Local school board in this and in subsequent elections, would have one vote for every 500 children appearing on their local school censuses. A school census of 1,501 to 2,000 children would provide four votes to that district in the area center planning meeting.

Area center school boards should have specific functions in establishing and administering area centers. These functions and duties would be to:

1. Appoint a superintendent in charge of the area center program.
2. Plan and execute a program of shared educational services (including vocational-technical education) at the request of local school districts and
3. Enter into contracts with other public agencies having facilities and personnel capable of providing appropriate educational services to the area.

In selecting superintendents of cooperative educational services, area center school boards may choose a superintendent at large from professionally qualified applicants. If any district superintendent now employed is not selected, he continues to perform the statutory responsibilities of the office of district superintendent with his tenure continued and his salary at no less than the present level.

All shared services programs, all equipment, and all obligations of existing boards of cooperative educational services should be consolidated into the area center.

Facilities and money for area vocational-technical programs should be obtained as follows:

1. Those qualified to vote and voting in an area election will determine whether these facilities are to be authorized.

2. The New York State Dormitory Authority will issue bonds and construct buildings.

3. Federal assistance, a State building quota, and administrative contributions of component districts will provide revenue for liquidating the bonds. Area center school boards will be authorized to own facilities on behalf of all component districts when these bonds are liquidated.

4. Funds for operating these area centers will come from State and Federal aid and local funds, determined mainly by the number of pupils served.

Title III of the Elementary and Secondary Act of 1965 will provide limited funds for supplementary educational centers and services (vocational-technical education, centralized school library services, comprehensive guidance programs, in-service teacher education, etc.).

The administrative structure provided by the ACCES centers will accommodate the multidistrict services authorized under Title III.

There should be a close relationship among secondary schools, community colleges and two-year agricultural and technical colleges in developing the full potential of area vocational-technical programs. Occupational education programs should be provided at the age and grade level most appropriate to the needs of individual students and employers. Large numbers of youth will continue to terminate their formal education with high school graduation. If these students (and in addition those who drop out of high school before graduation) are to be provided programs in occupational education, it is logical to assume that such programs will be offered at the high school level. For students who attend the community college, there is a need for advanced vocational-technical programs, ranging from those leading to employment at the termination of their community college programs to those (largely technical) that lead on to further college and university programs. Complete utilization of area resources will require coordination in program planning between high schools and community colleges (existing or projected) within an area served by an ACCES center.

The general location and school districts to be served by an area vocational-technical school should be based on the findings of the individual survey committees, the judgment of the State Education Department, and other pertinent data.

Existing vocational-technical programs and facilities which in the judgment of the area center school board and with the consent of the local board of education can be incorporated into a total area plan should be so incorporated.

Since most New York high schools are unable to meet the needs of all their students (certain existing shared service areas require consolidation in order to include enough students and local resources to support broad-choice vocational-technical instruction as well as accommodating Federal-State needs for manpower development and programs emerging under new Federal legislation), State legislation is needed to amend the New York State Education Law to provide the legal basis for establishment of the area centers of cooperative educational services.

The State Education Department is currently working with superintendents of schools and with the Division of the Budget to develop an acceptable State aid formula for shared services. The formula finally agreed upon will be widely publicized to the schools.

I. PURPOSE OF THE STUDY

In recognition of the vital role that occupational education must play throughout the State, the State Education Department instituted a statewide, coordinated plan to study the vocational education needs of the youth and adults of New York State. Findings of this study would provide a firm basis for planning the early establishment of area vocational education programs and facilities to serve these needs.

Recognizing that needs may vary considerably from region to region within the State, the Department provided the initiative for 24 in-depth goegraphic area studies, including all counties in New York State with the exception of the City of New York. Cooperative efforts of all the school districts within the geographic areas were elicited; policy committees were organized to supervise the studies and survey reports were prepared and distributed at the local level for utilization and implementation by local school administrators. This study is truly locally conducted and administered.

Interest in this type of study has developed in the last several years as educators in the State recognized the changing occupational needs of the economy and the composition of the current work force and the inseparable and integral part of vocational education in the total educational program. This interest was shared by associates in business, industry, agriculture, the professions and government. There emerged an awareness that a lack of training in specific fields leads directly to greater unemployment, and that this unemployment, in turn, contributes to the creation of a multitude of social problems.

New York State has been a pioneer in vocational education. For example, some aspects of this type of training, such as agricultural programs (first started in 1908), antedate the first Federal Vocational Education Act (Smith-Hughes) of 1918. Other states and foreign countries have adopted its instructional and administrative structure. In view of changing conditions, however, curriculum offerings must be more realistic and more diverse, and quality programs should be accessible to all persons seeking such instruction in more places. Recent Federal legislation makes it essential for the state and the counties to examine their programs and to change them to meet new educational, technological and employment needs. These new needs require both general and specialized education as preparation for all kinds of employment. While in some instances large business and industry will continue to train and retrain needed workers, educational institutions and training agencies are now called upon to provide much of the occupational education and retraining and will be called upon to do more.

The responsibility of the school in educating for local vocational needs was reexamined in light of recognized unemployment problems. There was an interest by all concerned in knowing how much additional education and training was really needed in the following: retraining from skills which have suffered from obsolescence through updating for automation and technical change, and advanced training for those who wished to add to their qualification for further responsibility or to increase security of employment by superior performance in their present work.

The common objectives of all of the geographic area studies were the following: (1) determine the extent of need for additional occupational training in New York State, (2) identify major occupational education programs in terms of present and future needs of employers, (3) determine in-school student, out-of-school youth, and parental interest in types of training and work situations, (4) measure the adequacy of present facilities and (5) judge the extent of popular community support for an increased area and statewide program of occupational education.

II. OCCUPATIONAL EDUCATION--A NEW DEFINITION

Currently many educators think of vocational education as essentially an education which prepares the individual for effective gainful employment and assists him in attaining a socially useful life. A recent definition of vocational education by the New York State Education Department suggests the following:

What
is
meant
by
OCCUPATIONAL
EDUCATION

> The term vocational education means vocational or technical training or retraining which is given in schools or classes, including field or laboratory work, under public supervision and control or under contract with the Board of Regents or local educational agency. Such programs are conducted as part of a program designed to fit persons for gainful employment as semi-skilled workers or technicians in recognized occupations, including business and office occupations, agriculture, home economics, trade, technical, service, health and others which the Commissioner determines. It includes any program for occupations not generally considered professional or requiring a baccalaureate or higher degree but includes semi-professional and technical occupations related to professional categories. Vocational education includes vocational guidance and counseling in connection with such training and instruction related to the occupation for which the student is being trained or necessary for him to benefit from such training. It includes programs now in existence as well as new courses or programs, so that persons of all ages in all communities--those in high school, those who have graduated or left high school and are preparing to continue their education or enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational handicaps will have ready access to training or retraining. Such training will be of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.*

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*Memorandum from Assistant Commissioner Joseph R. Strobel to Vocational Education Personnel and Others Concerned with the Further Development of the Program, February 15, 1965, Subject: Definition and/or purposes of Vocational Education.

Unfortunately, despite the comprehensiveness of the foregoing definition, the use of the term vocational education has, through the years, become more and more restricted in its actual application. Consequently, in order to convey more adequately the enlarged role vocational education will play in the future, as indicated by the composite "grassroots" thinking of all the research committees of the multiple area studies, the new term occupational education is introduced.

An occupational education program must be geared to the labor market (local, regional, state and, even, national basis) and in terms of both immediate and future needs. Thus, occupational education as used specifically in this report means preparation or retraining for employment in any occupational field which normally does not require a barralaureate or higher degree (therefore, not limited to the commonly assumed vocational fields of trade, business and cooperative education, but including a wide range of semi-professional and technical occupations as well).

Occupational information and education are vital for the economic growth of an area. Accordingly, occupational education should be an integral part of the total education program. To make such a program effective and realistic, it becomes necessary for the educational system to develop vocational courses based on manpower needs as well as on the desires of individual persons.

The overall occupational education program, therefore, must provide judicious pre-employment training for persons entering upon employment while concurrently offering retraining opportunities to update and upgrade employed workers who face changed conditions.

Thus training or retraining should be provided at the age and grade level most appropriate to the individual. Since large numbers of youth will not go beyond high school at the present time, much of the occupational training must be of a level that can be given effectively in a high school situation. The needs of many others--recent graduates and adults--may be best met by placing occupational education programs on the post high school level.

III. TERMINOLOGY ASSOCIATED WITH OCCUPATIONAL EDUCATION

Apprenticeship Training: A program of related and supplemental instruction in a craft, trade, industrial or technical occupation in which learners or apprentices are regularly and lawfully employed for the accepted term of the apprenticeship.

Area Vocational-Technical Center: A regional comprehensive area vocational-technical school serving school districts and students from adjoining areas. Such a center is considered as an integral part of each participating school district's total education program.

BOCES: This abbreviation stands for boards of cooperative educational services which share services among school districts.

Business Education: A program of instruction designed to train for employment in business occupations including secretarial jobs, bookkeeping, office machines and related areas.

Comprehensive High School: A senior high school offering a program of studies in academic, business, distributive and agricultural education. Except in a few such schools, trade, industrial and technical education curriculums are generally not provided.

Continuing Education: A program of instruction for employed adults which may include pre-employment, supplementary, and occupational extension classes.

Cooperative Work-Study Program: A program of alternating study in school with work on the job, the two phases being so planned that each contributes definitely to the student's education.

Distributive Education: A program of instruction designed to train for careers in selling, marketing, merchandising, and business management.

Decentralized County Plan: Several high schools in a county agree to offer a part of a vocation program for pupils from all districts. Pupils enrolled in trade courses are bussed to these courses. Academic work is taken in the home school.

Federal Vocational Education Act of 1963: Provides funds for a total program of occupation education for high school youth, adults, school dropouts, high school graduates who desire full-time instruction, and disadvantaged youth and adults on either a full-time or part-time basis.

Industrial Work-Study Program: A program distinguished from the Cooperative work-study program in that the work performed is a means of obtaining financial assistance in order to remain in school full time. This work program is not designed per se to contribute to the student's education.

Junior College: An incorporated institution with an admissions requirement of four years of secondary schoolwork or its equivalent, offering one, two, or three years of work in terminal courses of collegiate grade and quality; or an incorporated institution offering both standard and terminal courses. A junior college may issue a diploma indicating satisfactory completion of a one-year program or confer an associate degree or a diploma in recognition of satisfactory completion of a two- or three-year program. Note: The term "junior college" covers community colleges and institutes, including technical institutes as well as those institutions specifically designated as junior colleges.

Manpower Development and Training Act of 1962: A Federal Act which provides for the establishment of training and retraining programs for unemployed persons who cannot obtain employment with their present skills or who are working below occupational potential.

Occupational Extension: Instruction designed to supplement or extend the trade knowledge or skill, or both, of employed workers in industry.

Shared Educational Service Plan: Boards of education of one or more supervisory districts may provide special education services, including guidance and vocational subjects, on a shared basis. The program is administered under a Board of Cooperative Educational Services which is empowered to rent suitable quarters, equip classrooms and offices, and provide for transportation.

Technical Education: Preparation for employment in an occupation which requires mastery of a large amount of technical information including science, technology, mathematics, and drafting as applied to modern design, production and service.

Technical College: An institution offering a two-year terminal program leading to the degree of associate in applied science which emphasizes preparation for employment as a technician in a specialized field such as may complement the professional engineer.

Trade and Industrial Education: Instruction which develops basic manipulative skills (hand and machine), safety, judgment, technical knowledge and related mathematics, science, drawing, art or design specifically related to a trade or industrial occupation for the purpose of preparing secondary youth for initial employment as apprentices or advanced learners in industrial occupations and for training, retraining or upgrading adults.

Vocational Agricultural Education: A program of instruction in agriculture to train for occupations in farming and related fields including agricultural mechanics, agricultural business, ornamental horticulture, conservation, and forestry and other occupations involving knowledge and skills in agricultural subjects.

IV. BACKGROUND HISTORY--LOCAL SUPPORT

Why--Indications of a Need

Recognition of the need for some sort of vocational survey was initiated on the local level in the early 1940s. First perceptible signs of this recognition emanated from several cooperative boards of education. They felt it necessary to obtain and evaluate vocational needs on an area basis in order to further develop occupational courses in the local schools.

One of the first boards involved in a vocational survey was Nassau County Vocational and Extension Board. Other counties early identified with similar studies were Erie, Suffolk and Westchester.

Later impetus for these studies increased as interest of local school boards spread infectiously to surrounding districts. Monies from the Title III portion of the National Defense Education Act and Extension and Improvement Program up to July 1965, further intensified local support for an area studies program when the State Education Department introduced a policy of funding multiple school districts to conduct surveys in the early 1960s.

A partial listing of some of the questions for which the individual surveys hoped to find answers is as follows:

1. Is there a need for additional occupational training in New York State?
2. For whom should the schools provide vocational and technical education?
3. What are the statewide population and school enrollment trends?
4. Are student and adult populations in the regional areas large enough to warrant expanded vocational-technical education programs now and in the future?
5. Are there a sufficient number of schools offering adequate preparation for present day employment to adults who have skill potential but lack proper training?
6. Has the typical high school experience in the past been effective and adequate in preparing the average person to enter the job market?
7. What types of private education program could promote occupational training?
8. What provisions does industry make for occupational training?

9. What kind of occupational training do most employers want students to have?
10. What will be the future job market in New York State?
11. Will communities support an increase in public occupational education?
12. Do local businesses and industries in the multicounty study areas desire vocational-technical training programs for their area?
13. Why do students drop out of school?
14. Are there adequate vocational offerings for the slow learner and others who will have trouble developing marketable skills?
15. Should area occupational centers be set up?
16. Would transportation present a problem in setting up occupational centers?

Where--The Areas Affected

As plans for surveying occupational needs in New York State became more comprehensive and more ambitious than earlier studies, a regional concept of multicounty surveys evolved. It was hoped that the grouping of certain counties together for these surveys would clarify the educational and economic similarities and differences in relation to the State's economic areas. The following counties and economic regions are included in this study, except for New York City which was not covered in these studies.

Participating Counties of New York State

1. Albany, Rensselaer, Schenectady, Schoharie
2. Allegany (western part), Cattaraugus, Chautauqua
3. Broome, Chenango, Delaware, Otsego, Eastern Tioga
4. Cayuga, Cortland, Madison
5. Chemung, Tioga (western)
6. Clinton, Essex, Franklin
7. Columbia, Dutchess, Putnam
8. Erie

9. Fulton, Hamilton, Montgomery
10. Genesee, Niagara, Orleans
11. Greene, Sullivan, Ulster
12. Herkimer, Oneida
13. Jefferson, Lewis, St. Lawrence
14. Livingston, Schuyler, Steuben, Allegany (eastern part)
15. Monroe
16. Nassau (special commission study)
17. Onondaga, Oswego
18. Ontario, Wayne, Yates, Seneca (part)
19. Orange
20. Rockland
21. Saratoga, Warren, Washington
22. Seneca, Tompkins
23. Suffolk
24. Westchester

Economic Regions of New York State

Regions	Counties
Buffalo	Cattaraugus, Chautauqua, Erie, Niagara
Rochester	Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, Yates
Syracuse	Cayuga, Cortland, Madison, Onondaga, Oswego
Elmira	Allegany, Chemung, Schuyler, Steuben, Tioga, Tompkins
Binghamton	Broome, Chenango, Delaware, Otsego
Northern Area	Clinton, Essex, Franklin, Jefferson, Lewis, St.Lawrence
Capital District	Albany, Rensselaer, Saratoga, Schenectady, Warren, Washington

Mid-Hudson	Columbia, Dutchess, Greene, Orange, Putnam, Sullivan, Ulster
New York City	Not included
Metropolitan A	Nassau, Suffolk
Metropolitan B	Westchester, Rockland
Mohawk Valley	Hamilton, Fulton, Montgomery, Herkimer, Oneida

How--Study Procedures

The study groups developed a series of questionnaires designed to obtain relevant data from in-school youths, former students, early school leavers, parents, educators, and members of the business community.

Employment trends and population data were ascertained from United States Census reports, New York State Division of Employment studies, New York State Department of Commerce, and the New York State Education Department.

School information was obtained by utilizing resources of school administrators, guidance counselors, vocational teachers, etc.

Special surveys were made of agricultural employers; in some cases schools of agriculture were requested to act in a liaison capacity in supplying this information.

POPULATION

FACTS & FIGURES

V. THE POPULATION AND SCHOOL ENROLLMENT EXPANSION

The enrollment of students in the public schools of the State increased by more than 54,000 from the fall of 1964 to the fall of 1965. Most of this enrollment increase occurred in districts having more than 1,000 students.* Therefore, it may be assumed that the greater bulk of this student enrollment increase is due to population growth in the larger school districts. Of course, there is great variation in both enrollment size and rate of growth among the regions and counties. For example, although Long Island shows a positive rate of enrollment growth, Nassau County has tapered off to 3.40 percent in strong contrast to Suffolk County's growth rate of 19.75 percent.

The greatest concentration of students continue to be in the New York City metropolitan area consisting of New York City, Long Island and the Rockland-Westchester region, where 1,798,250 pupils or 58 percent of the State's total enrollment live.

New York City, itself, exhibits a very low rate of growth, but the three suburban regions nearest to the City are the most rapidly growing in the State; the Mid-Hudson region showing the greatest growth of all.

The following table shows the State's continuing enrollment growth in listing population figures for the past two years for each of the State's regions and counties except for the counties in New York City. Growth is indicated in each area other than the County of Hamilton which has the fewest pupils.

Table A

Public School Fall Enrollment by Region and County
1962-63 to 1964-65

Region	1962-63	1963-64	1964-65	% Change 1962-63 & 1964-65
New York State	2,960,568	3,051,006	3,121,717	5.44
New York City	1,027,428	1,046,523	1,054,201	2.61
Long Island	505,504	533,149	553,175	9.43
Nassau County	320,707	329,418	331,872	3.48
Suffolk "	184,797	203,731	221,303	19.75
Rockland-Westchester	176,943	184,440	191,274	8.10
Rockland County	32,485	35,636	38,713	19.17
Westchester "	144,458	148,804	152,561	5.61

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*Survey of Enrollment Staff, School Housing, Fall 1965, Bureau of Statistical Services, State Education Department.

Region	1962-63	1963-64	1964-65	% Change 1962-63 & 1964-65
Mid-Hudson	129,145	136,821	144,226	11.25
Columbia County	10,222	10,535	10,801	5.66
Dutchess "	32,871	35,678	38,410	16.85
Greene "	6,008	6,526	6,644	2.09
Orange "	37,871	40,280	42,296	11.68
Putnam "	6,901	7,455	8,149	18.08
Sullivan "	10,052	10,364	10,571	5.16
Ulster "	25,220	25,983	27,355	8.47
Capital District	143,731	148,910	153,030	6.47
Albany County	41,589	42,928	44,004	5.81
Rensselaer "	23,414	24,480	25,243	7.81
Saratoga "	22,669	23,875	24,700	8.96
Schenectady "	27,952	28,839	29,311	4.86
Schoharie "	5,914	5,976	6,162	4.19
Warren "	10,581	10,897	11,219	6.03
Washington "	11,612	11,915	12,391	6.71
Northern Region	84,860	86,537	87,912	3.60
Clinton County	15,260	15,542	15,843	3.82
Essex "	7,633	7,698	7,640	0.09
Franklin "	10,466	10,552	10,602	1.30
Jefferson "	20,012	20,450	20,841	4.14
Lewis "	6,573	6,866	6,886	4.76
St. Lawrence "	24,916	25,429	26,100	4.75
Mohawk Valley	93,253	95,691	96,292	3.26
Fulton County	11,747	11,895	11,959	1.80
Hamilton "	1,070	1,083	1,055	-1.40
Herkimer "	14,552	14,729	14,725	1.19
Montgomery "	10,730	11,074	11,167	4.07
Oneida "	55,142	56,910	57,386	4.05
Binghamton	83,414	85,396	85,591	3.81
Broome County	49,045	50,324	51,364	4.73
Chenango "	11,643	11,984	12,285	5.51
Delaware "	11,173	11,328	11,266	0.83
Otsego "	11,553	11,760	11,676	1.06
Syracuse	150,652	152,419	156,757	4.05
Cayuga County	14,246	14,692	15,279	7.25
Madison "	15,599	16,228	16,449	5.45
Onondaga "	89,369	89,282	91,556	2.45
Oswego "	22,119	22,889	23,658	6.96
Cortland "	9,319	9,328	98,115	5.32

Region	1962-63	1963-64	1964-65	% Change 1962-63 & 1964-65
Rochester	191,036	195,440	205,134	7.38
Genesee County	12,716	12,985	13,300	4.59
Livingston "	10,465	10,216	10,554	0.85
Monroe "	106,383	108,793	115,962	9.00
Ontario "	15,026	15,693	16,188	7.73
Orleans "	8,703	8,944	9,156	5.21
Seneca "	6,799	6,965	7,094	4.34
Wayne "	17,621	18,214	19,015	7.91
Wyoming "	8,330	8,618	8,817	5.85
Yates "	4,993	5,013	5,048	1.10
Elmira	85,714	88,648	90,499	5.58
Allegany County	11,149	11,421	11,368	1.76
Chemung "	21,332	22,164	23,016	7.89
Schuyler "	3,266	3,417	3,484	6.67
Steuben "	25,068	25,817	26,316	4.98
Tioga "	10,563	11,028	11,093	5.02
Tompkins "	14,336	14,801	15,222	6.18
Buffalo	288,388	296,125	302,626	4.94
Cattaraugus County	18,558	18,863	18,974	2.24
Chautauqua "	32,969	33,582	34,270	3.95
Erie "	185,002	190,985	195,765	5.82
Niagara "	51,859	52,695	53,617	3.39

Findings Based on County and School Populations of the Individual Area Studies

Albany, Rensselaer, Schoharie, Schenectady
(Part of the Capital District Economic Region)

1. Population growth from 1950 to 1960 was from 537,193 to 591,023, a growth rate of 10 percent.

2. The projected population (low estimate) in the four county area for 1970 will be 664,170 or 12.4 percent; for 1980 it will be 887,814 or 25.1 percent.

3. About 68 percent of the total population live in the tri-city (Albany, Schenectady, Troy) urban cluster. Even greater concentration of the population in this area is expected by 1970.

4. Substantial increases in the 15-19 population age group is expected in 1970 and beyond in the four-county area.

5. Fall enrollment in 1963 was 102,223. The 10th, 11th and 12th grade enrollment is expected to grow from 19,628 in 1963 to 23,650 in 1972. The greatest increase in 10th-12th grade enrollment will be in Albany County.

Allegany, Cattaraugus, Chautauqua (Buffalo Economic Region)

1. Enrollment in grades 10, 11 and 12 of the public schools in 1964 was 2,375 in Allegany, 4,063 in Cattaraugus, and 7,085 in Chautauqua.

2. Enrollment increases in this decade are estimated at 3 percent in Allegany, 10 percent in Cattaraugus, and 14 percent in Chautauqua.

Broome, Chenango, Delaware, Otsego and Tioga (Binghamton Economic Region)

1. School enrollment to increase by 56 percent or more in the next 10 years.

2. Dropout rate is expected to be between 20 and 30 percent.

Cayuga, Cortland, Madison (Part of Syracuse Economic Region)

1. Population figures in 1964 were 75,377 for Cayuga, 43,374 for Cortland and 58,691 for Madison.

2. The survey area as a whole had a population increase of 10.6 percent in the decade 1950-1960.

3. Enrollment figures: Entering students under 5 years of age increased 17.7 percent in the decade 1950-1960; students, ages 5-19, increased 37.2 percent in the decade 1950-1960; students, ages 20-49 declined (62,077 in 1964 to 60,445 in 1965).

Chemung, Tioga (part), Elmira Enlarged City School District (Part of Elmira Economic Region)

1. Population in 1962-63 for Chemung was 100,000; for the western section of Tioga it was 6,250.

2. Total public school enrollment K-12 was 23,082 in 1962-63. Parochial school figures for grades K-12 for the same period were 3,788, thus giving a combined enrollment of 26,870.

Clinton, Essex, Franklin (Part of the Northern Area Economic Region)

1. Enrollment projections for Clinton indicate that the high schools of the County will have a gradual increase up to 1972 of about 51 percent.

2. Enrollment projections for Essex indicate that the high schools of the County will have a gradual increase up to 1972 of about 23 percent.

3. Enrollment projections for Franklin indicate that the high schools of the County will have a gradual increase up to 1972 of about 26 percent.

Columbia, Dutchess, Putnam (Part of Mid-Hudson Economic Region)

1. Population in 1940 was 178,561. In 1963 it rose to 273,756.

2. Population projections for 1970 range from 51,360 to 57,771 for Columbia, from 218,610 to 270,180 for Dutchess and from 51,231 to 57,647 for Putnam. The total population for all three counties in 1970 ranges from a low of 321,201 to a high of 385,598; for 1980 the total population ranges from a low of 428,792 to a high of 574,716.

3. Enrollment distribution in grades 9, 10 and 11 for 1964 show that Columbia had 2,386 students, Dutchess had 7,565 and Putnam had 1,572, giving a total enrollment of 11,523.

4. Projected enrollment for grades 10, 11 and 12 for 1967-68 gave Columbia a 2,497 enrollment, Dutchess 8,559 and Putnam 2,059.

Erie (Part of Buffalo Economic Region)

1. Population was 899,238 in 1950. It increased to 1,064,000 in 1960 and to 1,105,000 in 1963.

2. Population projection for 1970 is 1,200,000; this will be an 8.6 percent increase over 1963 figures.

3. School enrollment, grades K-12 was 172,055 in 1960 and 190,985 in 1963.

4. Enrollment for 1970 is projected to be 239,500, consisting of 140,000 K-6 students and 99,500 grades 7-12 students. A total gain of 25 percent over 1963 is anticipated.

5. Enrollment in diocesan schools, grades K-12 in 1960 was 77,496 and in 1963 was 80,527. Projections in 1970 indicate a total of 83,000 students in diocesan schools.

Fulton, Montgomery and Hamilton (Part of Mohawk Valley Economic Region)

1. Population was 114,720 in 1950. It decreased to 112,811 in 1960, a -1.7 percent decrease.

2. Enrollment in the high school 9-12 in 1964 was 7,522. There is expected to be an increase of approximately 8 percent to 1970 which would give a projected 1969-70 enrollment of 8,124.

Niagara, Orleans, Genesee (Part of the Buffalo and Rochester Economic Regions)

1. Population in this tri-county area shows a growth from 1950 of 267,558 to 352,116 in 1963, or 25 percent. The projected population by 1970 will be 398,129.
2. Enrollment in the high school 9-12 in 1963 was 18,814. Projected high school enrollment for 1969-70 will be 21,654.

Greene, Sullivan, Ulster (Part of the Mid-Hudson Economic Region)

1. Population growth shows a steady increase in all counties since 1950.
2. Total school enrollment in 1963-64 for all three counties was 42,486. In grades 10-12 the enrollment for the same period was 8,258.

Herkimer, Oneida (Part of Mohawk Valley Economic Region)

1. Population in 1960 was 330,771, an increase of 16.4 percent since 1950.
2. High school enrollment including parochial schools is 23,092.
3. Projected enrollment for 1970 is 28,000.

Lewis, Jefferson, St. Lawrence (Part of the Northern Area Economic Region)

1. Enrollment growth from 1964 to 1965 is 2.5 percent.
2. Areas anticipating the greatest enrollment increase by 1970 are St. Lawrence (Northeast), Jefferson(East) and Lewis (Central).

Schuyler, Steuben, Livingston, Allegany (Part of Rochester and Elmira Economic Regions)

1. Population of the survey area was 203,530 in 1962, an increase of 2,764 over the 1960 figures.
2. The population appears to be stabilized and little growth is predicted.
3. High school enrollments, grades 9-12, total 11,487. Projected enrollment, grades 9-12 in 1968-69 is 13,065.

Monroe (Part of Rochester Economic Region)

1. The number of inhabitants reached 586,387 in 1960, an increase of 20 percent over 1950.
2. Enrollment in grades 10 and 11 in 1964 was 15,607.

Nassau (Metropolitan A Economic Region)

1. Enrollment in grades 9-12 in 1958-59 was 59,231; in 1962-63 the enrollment was 65,674.

2. Enrollment in high school, grades 10-12 in 1958-59 was 59,231; in 1962-63 the enrollment was 85,540.

Onondaga and Oswego (Part of Syracuse Economic Region)

1. Population in Onondaga was 423,028 in 1960, up 23.8 percent from 1950. Population in Oswego was 86,118 in 1960, up 11.6 percent from 1950.

2. As of March 1964 there were 27,521 students enrolled in all programs (academic, college preparatory, general, and vocational) in the high schools (9-12 grades) in the two counties.

Ontario, Seneca, Wayne, Yates (Part of the Rochester Economic Region)

Projected high school enrollment will go from 11,959 to 13,967, an increase of 16 percent.

Orange (Part of the Mid-Hudson Economic Region)

1. The population in Orange County and the City of Beacon (which collaborated in an area study) was 166,287 in 1950 and 175,000 in 1958.

2. No enrollment figures were supplied other than for vocational students, but those figures were indicative of substantial student enrollment growth.

Rockland (Part of the Metropolitan B Economic Region)

1. The population in 1963 was 162,029. Projection through the year 1975 indicates there will be a population of approximately 300,000.

2. In 1963 total school enrollment, K-12 was 35,443. Projections for the decade ahead show that the school enrollment by 1973 can be expected to reach 67,884. Projected increases in the senior high school from 5,941 in 1963-64 will reach a total of over 14,000 in 1973.

Saratoga, Warren, Washington (Part of the Capital District Economic Region)

1. Population is expected to increase from 181,500 in 1960 to between 246,350 and 273,250 by 1980.

2. School enrollment has increased very slightly between 1959-1963.

Saratoga, Warren, Washington (Cont'd.)

3. Enrollments in grades 10, 11 and 12 are expected to increase by approximately 25 percent by 1972.
4. Enrollments in local school districts are expected to increase equally in all three counties.

Seneca, Tompkins (Part of Rochester and Elmira Economic Regions)

1. Population in Tompkins in 1950 was 59,122; in 1960 the population had risen to 66,164.
2. Population projection for 1970 is 73,061, representing an increase of 23.6 percent from 1950 to 1970.
3. Enrollment in 1962-63 for Tompkins-Seneca Public Schools, K-12, was 16,487.
4. Enrollment in 1962-63 for Tompkins-Seneca Public High Schools, grades 9-12, was 4,249.
5. No projections are given, but growth is expected.

Suffolk (Part of Metropolitan A. Economic Region)

1. Population in 1940 was 197,355; in 1960 the population had risen to 666,784.
2. A population of 1,000,000 was projected for 1965.
3. Enrollment in grades 9, 10 and 11 in 1961 totaled 26,229.

Westchester (Part of the Metropolitan B Economic Region)

1. Population is increasing steadily. Projections through the year 1975 indicate there will be a population of 1,000,000. These projections show an increase of almost 300 percent since 1920.
2. Actual school enrollment in grades 10-12 was 32,205 in 1963. The enrollment projection for 1973 is 37,178. In grades K-12 in 1963 there were 147,636 students enrolled. A figure of 163,096 is projected for 1973.
3. It is predicted that about 200,000 public school children will be in attendance within the next two decades.

Summary

The general population and school enrollment of New York State continue to show a strong growth pattern; thus plans must be made to increase educational facilities to house this predictable student population explosion.

VI. OCCUPATIONAL INTEREST OF HIGH SCHOOL AND OUT-OF-SCHOOL YOUTH

A detailed study of the occupational interest of high school youth in the 24 survey areas suggests certain occupational areas that frequently are a common choice among students. Within each local study it must be remembered that there are significant variations among student preferences in occupations, but these local differences are of a nature which do not alter the statewide picture.

It is not the purpose of this report to list every occupation in which one or more persons is interested; but, rather, the aim is to highlight areas of choice. It is suggested that if one wants a more detailed picture of occupational interest for any particular area, he consult the area study in question.

All occupational areas were tabulated and ranked into major occupational interests. The rank order of these major categories should be taken in the nature of suggesting a generally descending order of major student occupational interests.

Major Occupational Categories (Derived from the separate geographic area surveys and do not necessarily reflect State Education Department program terminology)

A. Business Education

    1. Business and Office Skills - (a) Typing, (b) Shorthand, (c) Secretarial Skills (d) Office Machines, (e) Filing

    2. Tabulating Skills - (a) Bookkeeping, (b) Comptometer, (c) Keypunch, (d) Data Processing

    3. Distributive Skills - (a) Retailing, (b) Merchandising, (c) Retail Service

B. Personal Service

    1. Barbering

    2. Cosmetology

OCCUPATIONAL CHOICES

C. Health Services: Medical and Dental Technician; Practical Nursing

D. Electrical Industries Occupations

E. Automotive Industries Occupations

F. Laboratory Technology

G. Public Service Industries

  1. Government - Civil Service
  2. Police and Firemen
  3. Armed Forces

H. Technicians

  1. Technical and Scientific
  2. Electronic
  3. Mechanical
  4. Instrumentation

I. Construction Industries Occupations

  1. Mason
  2. Carpentry
  3. Construction

J. Amusement Industry

  1. Recreation
  2. Acting

K. Agriculture

  1. Farming
  2. Sales and Technology
  3. Horticulture
  4. Agriculture Services
  5. Forestry
  6. Conservation
  7. Agricultural Mechanics

L. Service Industry

  1. Hotel Services
  2. Tailoring
  3. Food Services

M. Transportation

The following list suggests other occupational areas noted as significant in terms of student interest in one or more counties, although these occupational areas did not rank as high as the earlier mentioned occupational categories on a statewide basis. The listing of these additional occupations is not to be considered as a ranking.

A. Interior Decorating
C. Radio - TV Services
E. Aviation Mechanics
G. Printing
I. Plumbing, Air Conditioning, Heating
J. Machine and Metal Trades, Including Welding
K. Building Maintenance Repair
M. Mining

B. Commercial Art
D. Small Appliance Repair
F. Industrial Chemistry
H. Textile Fabrication
L. Homemaking Occupations

Conclusion

If students' desires are to be taken into account in respect to occupational areas, it is evident that the wide scope of occupational interest suggested by the major categories plus the additional 13 occupational areas noted as significant, calls for a dramatic expansion of vocational education courses on the the high school level.

INTERESTS OF OUT-OF-SCHOOL YOUTH

Although nine surveys had little or nothing on the interests of out-of-school youth, data from 15 of the 24 studies reflect a real interest in occupational extension courses for out-of-school youth. Often the percentage of young adults desirous of further occupational preparation was 70 or higher although in two studies the percentage was less than 50.

WHAT DO STUDENTS SAY?

VII. MAJOR VOCATIONAL COURSES DESIRED BY HIGH SCHOOL YOUTH IN TERMS OF FREQUENCY OF STUDENT CHOICE AND IN TERMS OF FREQUENCY OF LISTING AMONG THE MULTICOUNTY STUDIES

The data collected and compiled in this section will suggest the major vocational courses desired by high school youth and will, at the same time, provide an additional measure for determining the occupational interests of these youth. It is hoped that this type of student information, taken in conjunction with employer interests and needs, will provide for an expanded and more meaningful vocational education program.

Heretofore, information such as this has not been generally available for local regions; it certainly has not been available on a statewide basis. The vocational programs desired by high school youth throughout New York State are ranked as shown below. Professional type courses are omitted, since they do not technically fit into a vocational-occupational study.

Major Vocational Courses Desired by Students According to Accummulative Total Rank Within Surveys

Rank	No. of Surveys	Vocation
1	12	Business and Office Skills
2	15	Automotive Industries Occupations
3	15	Cosmetology
4	15	Practical Nursing
5	14	Tabulating Skills
6	15	Electrical Industries Occupations
7	15	Commercial Art Industries Occupations
8	15	Construction Industries Occupations
9	14	Drafting Industries Occupations
10	14	Medical or Dental Technician
11	14	Machine and Metal Industries Occupations (including welding)
12	4	Child Care
13	9	Distributive Skills
14	9	Off-Farm Activities
15	6	Small Equipment Repair
16	5	Public and Protective Services
17	10	Farming
18	11	Food and Hotel Services Industries
19	4	Printing Industries Occupations
20	7	Interior Decorating Industries Occupations
21	7	Aviation Industries Occupations
22	5	Chemical Industries Occupations
23	5	Textile Industries Occupations

The courses desired by high school youth are reported in terms of most popular choice to less popular. The implication is that plans must be made to extend and enlarge vocational course offerings to interested students, provided such course selections fit into the larger picture of employment needs.

Major Vocational Courses Desired by Students in Terms of Survey Frequency Among the Multicounty Studies

No. of Local Surveys in Which Course Appeared	Vocational Area
15	Automotive Industries Occupations
	Cosmetology
	Practical Nursing
	Electricity and Electronics Industries Occupations
	Commercial Art Industries Occupations
	Construction Industries Occupations
14	Tabulating Skills
	Drafting Industries Occupations
	Medical or Dental Technology
	Machine and Metal Industries Occupations (including welding)
12	Business and Office Skills
11	Food and Hotel Services Industries
10	Farming
9	Distributive Skills
	Off-Farm Activities
7	Interior Decorating Industries Occupations
	Aviation Industries Occupations
6	Small Equipment Repair
5	Public and Protective Services
	Chemical Industries Occupations
	Textile Industries Occupations
4	Child Care
	Printing Industries Occupations

Conclusion

Both in terms of frequency of student choice and in terms of frequency in listing among the multicounty studies, the following 15* curriculums appear to be most popular throughout New York State: Business and Office Skills, Automotive Industries Occupations, Cosmetology, Practical Nursing, Tabulating Skills, Electricity and Electronics Industries Occupations, Commercial Art, Construction Industries Occupations, Drafting Industries Occupations, Medical and Dental Technology, Machine and Metal Industries Occupations, Child Care, Off-Farming Activities, and Small Equipment Repair.

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*This particular figure is an arbitrary one.

Additional findings based on local survey reports on high school students' course selections include:

1. High school youth place a high value on formal general and vocational education. They show considerable concern for the need for some form of preparation for a specific vocation.

2. Many senior students lack a sense of having had specific preparation for a vocation. They often indicated that subjects they had taken had little or no specific application to the work they plan to enter after leaving school.

3. Many students would have enrolled in trade or technical subjects if those in which they are interested had been available.

4. Many students have a clear notion of the occupation they would like to follow, but others do not, and need good vocational guidance.

5. While some may question the significance of the feelings expressed by individual high school students concerning their vocational choices, in the main it would appear that student opinion, preference, and interest will play a large part in shaping educational planning in the future, as was further substantiated by the high correlation between a student's expressed choice and his parent's concurrence.

REPORT FROM PARENTS

OF HIGH SCHOOL YOUTH

VIII. PARENT OCCUPATIONAL INTEREST

One of the major aims of the 24 surveys was to obtain an accurate picture of parental attitudes and interests as they related to occupational training. Parental opinion is invaluable because:

1. Parents are vitally interested in their children.
2. Many parents have changed jobs, employers, and even communities in the course of their working years; therefore, the question of security linked to a job is often a factor in their consideration.
3. Many parents have had the opportunity to maintain their jobs and earn advancement, thereby gaining insights into the inherent problems associated with work.
4. Some parents have had the experience of being unemployed and have been able to see its effect on themselves and others.

In order to determine the extent to which parents are interested in vocational education, a number of specific questions were directed to them.

In answer to the question: "Do you approve the choice of occupations made by your son or daughter?" and to the related question: "Do you approve of the vocational courses taken by your son or daughter?" the county studies clearly reveal that parents agree overwhelmingly with their children's preferences. This finding should be considered by guidance counselors, students, and parents because it shows that many parents do approve of vocations which do not require a college degree and therefore make possible a more practical plan for students to secure training in courses related to vocations. In this connection, 89 percent or more of the parents in six survey areas favored expanding vocational programs for high school students.

In answer to the question: "Do you favor expanding vocational education opportunities for adults?" parents in 11 surveys indicated a real desire to expand such education. Eight surveys showed that 80 percent or more of the parents were interested.

Many parents indicated that they themselves would enroll in vocational courses, but interest here was less positive. For example, although six surveys showed some considerable interest on the part of parents to actually register for vocational courses, the percentage of parents so interested as opposed to vocational courses for adults in general never exceeded 50 percent except in one survey area. As seen on a statewide basis (based on approximately 2/3rds of the 24 surveys), the programs that parents would like to take are as follows:

Courses for Men

1. Construction Industries Occupations
2. Electronic Industries Occupations
3. Distributive Skills (retailing, merchandising)
4. Automotive Industries Occupations
5. Electrical Industries Occupations (including servicing)
6. Machine and Metal Industries Occupations (including welding)
7. Horticulture
8. Drafting Industries Occupations
9. Farm Mechanics and Management
10. Plumbing Industries Occupations
11. Food Industries Occupations
12. Electronic Communications Industries Occupations

Courses for Women

1. Practical Nursing
2. Business Machines
3. Clerk-Typist-Receptionist
4. Secretary-Stenographer
5. Bookkeeper
6. Cosmetology
7. Food Industries Occupations
8. Dental-Medical Technician
9. Commercial Art Industries Occupations
10. Horticulture
11. Textile Industries Occupations
12. Apparel Industries Occupations

Need for Comprehensive Offerings

The majority of parents seem keenly aware of the need for providing a comprehensive program of vocational education in the high schools; a program geared to the needs and goals of the noncollege bound as well as the college oriented. When the question of college is considered, many parents realize that not all children are going to attend an academic or professional college and feel that something else must be provided. This something else, in most instances, should be a vocational program not requiring a college degree. The high school curriculum, then, should be a balanced one where vocational and related technical courses are provided along with general education.

In determining the extent and content of the curriculum pertaining to the world of work, parents suggest that industry's needs for technical training be kept clearly in mind. Of course, students' interest and abilities must always be considered, too. Flexibility in planning is necessary in order to avoid the specific shortages of a particular skill today which may become surplus tomorrow. The curriculum, then, is not to be planned by educators alone, but rather it should be developed cooperatively among educators, state and local officials, and industrial, business, agricultural, and other lay groups.

Finally, parents feel that a knowledge of factors which contribute to employment, unemployment, and underemployment must be made available to those who could profit by such information.

There are convincing reports from parents to the effect that their children, by and large, are not knowledgeable to any extent in the techniques and practical skills called for in applying for a position. Many young people fail to understand the dynamics of searching for a job, and unless a position is given to them, they do not know how to apply for or seek a job. Class work and group guidance at the high school level would greatly help meet this problem.

An awareness by students of the contributing unemployment factors could materially aid them in avoiding pitfalls on the road to employment as well as give them greater assurance of maintaining their jobs when once employed. An illustrative set of factors which parents of Monroe County feel contribute to unemployment is listed below as a typical finding in New York State:

Major Factors

1. Changing economic cycles: depressions, prosperity, recessions, seasonal changes

2. Technological changes: automation, changes in methods, materials, machines, processes

3. Responsibilities to parents, relatives, friends discourage moving to other locations

Major Factors (cont'd.)

4. Limited job knowledge, skill-education and training
5. Uncertainty as to where the jobs are and how to look for a job; also wages, hours, conditions
6. Inability to make a good impression on potential employers (aptitude, appearance)
7. Uncertainty that a new job will provide the pay and security now provided by welfare programs
8. Discrimination based on race and creed
9. Health or handicaps

IX. REGIONAL SURVEY OF TYPES OF INDUSTRY WITH IMPLICATIONS FOR FUTURE EMPLOYER NEEDS

This overview attempts to show the spread of currently available jobs and future trends as interpreted by employers.

The demand for new workers is greatest in the white-collar occupations. Within this category there are the clerical, professional, technical, managerial and proprietary, and sales personnel. The largest number of jobs to be filled, according to the data from the New York State Department of Labor (1960) and suggested by some of the findings of the several survey groups, are in the first three groups within the white-collar category: clerical, professional and technical.

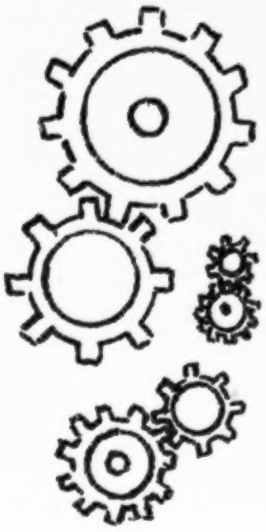
The second largest category is that of the blue-collar or manual occupations, although there will be a need for only 50 percent of as many workers as required in the white-collar category.

The third largest, but considerably smaller, category of job openings is in service areas.

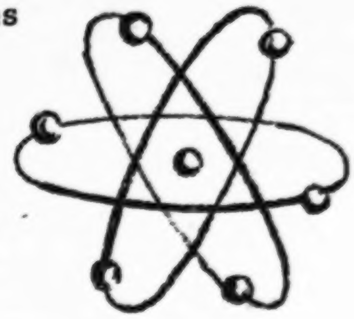
Requirements for unskilled laborers in industry and on farms will be negligible, yet there will need to be substantial numbers of workers prepared in the skilled crafts and for work as operatives in industry.

It is estimated that by 1970 the labor force in this State will be 8.7 million, based upon an increase in the labor force of 1.5 percent per year. Youth entering the labor market will account for 47 percent of the increase whereas older persons will account for 53 percent.

A brief picture of the dominant industries and occupations in representative survey areas highlights the regional employment needs. Employers in major industries as well as some small industry employers were asked to provide answers to questions such as the following, with respect to their areas:



1. What are the predominant types of industries and occupations?
2. What is the nature of distribution of workers?
3. What are the occupational shortages or expected needs?
4. What are the vocational course choices of the employers?
5. What types of on-the-job training are conducted?
6. What are the skills and attitudes most needed to qualify applicants for employment? (Results of this particular question are given in Chapter X)



Albany, Rensselaer, Schenectady and Schoharie Area Study

A. Predominant Types of Industries

Albany County

	Increase or Decrease* 1963 over 1953	Projected 1973
Trade	2,700	33,400
Manufacturing	(1,600)	22,400
Service	2,200	11,000
Transportation and Utilities	1,100	8,200
Finance, Insurance and Real Estate	2,000	7,800
Construction	2,000	5,100

Rensselaer County

	Increase or Decrease* 1963 over 1953	Projected 1973
Manufacturing	(3,900)	11,000
Trade	-------	8,000
Service	200	3,100
Finance, Insurance and Real Estate	100	1,800
Construction	100	1,600
Transportation and Utilities	(600)	1,200

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*Bracketed figure means a decrease.

Schenectady County

	Increase or Decrease* 1963 over 1953	Projected 1973
Manufacturing	(31,200)	22,400
Trade	1,400	13,200
Service	3,700	7,700
Finance, Insurance and Real Estate	300	2,200
Construction	-------	1,900
Transportation and Utilities	300	1,600

Schoharie County

Manufacturing	-------	1,000
Trade	200	1,000
Service	-------	700
Construction	100	300
Finance, Insurance and Real Estate	-------	200
Transportation and Utilities	-------	100

B. Distribution of Workers by Major Occupational Grouping in Rank Order (1960)

Albany County

1. Clerical Workers
2. Operative
3. Professional, Technical
4. Craftsmen, Foremen
5. Service Workers
6. Officials, Proprietors (Excl. Farm)
7. Sales Workers
8. Laborers
9. Farmer, Farm Manager

---

*Bracketed figure means a decrease.

Rensselaer County

1. Operatives
2. Clerical Workers
3. Craftsmen, Foremen
4. Professional, Technical
5. Service Workers
6. Officials, Proprietors (Excl. Farm)
7. Sales Workers
8. Laborers
9. Farmer, Farm Manager

Schenectady County

1. Professional, Technical
2. Clerical Workers
3. Operatives
4. Craftsmen, Foremen
5. Service Workers
6. Officials, Proprietors (Excl. Farm)
7. Sales Workers
8. Laborers
9. Farmers, Farm Managers

Schoharie County

1. Laborers
2. Farmers, Farm Managers
3. Operatives
4. Craftsmen, Foremen
5. Service Workers
6. Clerical Workers
7. Professional, Technical
8. Officials, Proprietors (Excl. Farm)
9. Sales Workers

C. Expected Occupational Need Changes (1964 through 1975)

Large Increase

Professional and Technical
Clerical and Sales

Moderate Increase

Skilled
Proprietary and Managerial
Service

No Change

Semi-Skilled

Decrease

Unskilled
Farm

Allegany, Cattaraugus and Chautauqua Area Study

According to the U.S. Census of 1962 the predominant types of labor force categories are the following: Trade and Industrial, Business and Distributive, Agriculture, Technologies, and Health Services.

The number of farm laborers is decreasing, but of those who remain, increased competency is required in farm machinery and agricultural technology including animal and crop production, agricultural economics and farm management.

Broome, Chenango, Delaware, Otsego and Eastern Tioga Area Study

A. Predominant Types of Labor Force Categories

Manufacturing provided the largest source of additional jobs during the 1950s and has now become the principal industrial source of employment in all five counties. Smaller increases took place in retail trade, services, and government. During this period there were large declines in farm employment. The counties by 1960 had become predominantly "industrial" rather than "agricultural" areas.

Most of the jobs in the five counties in 1960 were in goods producing industries (agriculture, manufacturing and construction); however, as just noted, the trend in jobs was sharply away from farming. The outlook for construction jobs is relatively too poor because of slow population growth. The transportation, industry employment, chiefly railroad jobs, has also declined. Jobs in the trades show a tendency to increase.

B. Distribution of Workers

In the 1950s white-collar jobs showed the largest rate of increase, especially those in the clerical, and professional and technical categories. Factory operative jobs also showed substantial gains in all areas except Broome. Manual labor jobs declined generally.

C. Expected Needs

The outlook for the next few years is for slow rates or even decreases in total employment. There is little reason for any prospect of growth in the craftsmen group, laborers and farm workers. There should be a relatively large need for workers in the professional, technical, clerical, sales, service, and operative categories.

Most openings in the five counties will occur as the result of replacements rather than from growth.

D. Vocational Course Choices of Employers

A Significant number of employers indicated that there should be more vocational and trade training in specific occupational skills.

E. On-the-Job Training

Not too many (under 10 percent of reporting firms) employers conduct formal training within the firm. But there were many employers who, although they preferred not to use the label "formal" to characterize their training, did in fact conduct on-the-job training for many of their employees. The incidence of training increases with the size of the organization.

Clinton, Essex and Franklin Area Study

Distribution of Workers by Major Occupational Grouping

Clinton County

- Clerical and Sales
- Machining Occupations
- Agriculture, Forestry and Fisheries
- Food Preparation and Service
- Appliance Maintenance and Repair

Essex County

- Machining Occupations
- Clerical and Sales
- Agriculture, Forestry and Fisheries
- Food Preparation and Service
- Appliance Maintenance and Repair

Franklin County

- Machining Occupations
- Clerical and Sales
- Agricultural, Forestry and Fisheries
- Food Preparation and Service
- Appliance Maintenance and Repair

Erie Area Study

A. Predominant Types of Industries (1960)

Manufacturing	(1 out of 3 employed persons)
Sales	(1 " " 5 " ")
Agriculture	(1 " " 9 " ")
Service	(1 " " 9 " ")
Government Service	(1 " " 10 " ")
Transportation and Utilities	(1 " " 15 " ")
Construction	(1 " " 20 " ")
Banking, Insurance and Real Estate	(1 " " 30 " ")

B. Expected Needs

The Department of Labor data (1960) showed 176,800 workers in manufacturing, 54,500 in agriculture, and 257,300 in other (nonmanufacturing and nonagriculture) classifications. These figures in overview would seem to indicate that the nonmanufacturing, nonagricultural element of the total work force provide the most opportunities for employment and that these jobs are increasing at a rapid rate.

C. Vocational Course Choices of Employers

- Machine Shop Practice
- Pattern Making - Molders
- Blueprint Reading
- Mechanical and Electrical Drafting
- Electronics (Vocational and Technical Institute Levels)
- Business Training
- Aircraft and Power License
- Technical Training
- Advanced Layout
- Chemistry (post high school technical level)
- Physics (post high school technical level)
- Office Work
- Welding
- Tool and Die Making
- Accounting
- Retail Services
- Printing
- Lumber Technology
- Carpentry - Woodworking - Cabinetmaking
- Sheet Metal Layout
- Automotive Mechanics
- Driver Education
- Heating Service Training
- Comptometer Operation
- Cooking - Baking
- Plumbing and Steamfitting
- Distributive Trades
- Garment Manufacturing
- Upholstering
- Health Education
- Laboratory Technician
- Graphic Arts
- Food Specialization
- Automatic Machine Operators
- Management Courses
- Bricklaying - Masonry
- Metalurgy and Metal Finishing
- Computer Mathematics, Programming
- Foundry Operations
- Hydraulics

Oneida and Herkimer Area Study

A. Predominant Types of Occupations

Semi-Skilled Operator
Clerical Worker
Craftsman
Professional and Technical Worker
Manager and Proprietor
Sales Worker
Laborer (except in farming) and Domestic
Farmer and Farm Manager
Farm Laborer

B. Distribution of Workers

Manufacturing	34.0	percent
Service Industries	20.8	"
Retail Trade	13.8	"
Public Administration	9.3	"
Public Utilities	5.5	"
Agriculture	4.8	"
Construction	4.7	"
Finance, Insurance, Real Estate	3.6	"
Wholesale Trade	2.4	"
Mining	0.2	"

C. Occupational Shortages as Stated by Employers

Semi-Professional-Technical Worker

Electronics Technician
Engineering Technician
Designer
Draftsman
Circuit Analyst
Medical Technician

Business Office Worker

Stenographer
Secretary General, Medical, Legal
Bookkeeper
Business Office Representative

Skilled Trades Worker

Tool and Die Worker
Machinist
Designer
Sheet Metal Worker
Blueprint Draftsman
Furniture Craftsman

Skilled Trades Worker (cont'd.)

Welder
Upholsterer
Photoengraver
Linotyper
Pressman
Printer
Compositor
Plumber

Semi-Skilled Worker

Machine Operator
Service Station Operator
Assembler
Sewing Machine Operator
Spray Painter
Roofer
Tailor
Screw Machine Operator

D. Employer's Choice of Vocational Courses that Should be Offered

Bookkeeping
Secretarial and Stenographic
Clerical
Business Machine Operation
Electricity
Machine Trade
Welding
Drafting
Retailing
Carpentry (building construction)
Plumbing-Heating
Custodial
Electric Appliance Repair
Landscaping, Horticulture
Textile Fabricating
Electronics
Sheet Metal
Printing
Auto Mechanics
Farm Operation
Agriculture Sales and Service

E. On-the-Job Training Employers Must Provide Because of Lack of Skilled Applicants or Nature of Job. (Ranked in order of number of times mentioned)

1. Machine Operation
2. Sales
3. Clerical
4. Equipment Serviceman
5. Assembly
6. Warehousing
7. Teller
8. Packing
9. Inspection
10. Truck Driving
11. Shipping and Receiving
12. Maintenance
13. Custodial

22. Upholstering
23. Masonry
24. Carpentry
25. Fork Lift
26. Grinding
27. Mechanical
28. Plumbing
29. Bookkeeping
30. Typesetting
31. Press Operations
32. Hydraulic Equipment
33. Estimating
34. Concrete

E. On-the-Job Training Employers Must Provide Because of Lack of Skilled Applicants or Nature of Job. (Ranked in order of number of times mentioned) - (cont'd.)

14. Hospital Attendant
15. Baking
16. Molding
17. Sheet Metal
18. Welding
19. Printing
20. Cutting
21. Proofreading
35. Telephone Operator
36. Painting
37. Counterman
38. Blueprint Reading
39. Retailing
40. Buying
41. Butchering
42. Soldering
43. Laundry Processor

Monroe Area Study

A. Predominant Types of Labor Force Categories

Manufacturing
Trade
Service
Government
Construction
Transportation, Communication and Other Public Utilities
Finance, Insurance and Real Estate

B. Distribution of Workers by Major Occupational Grouping (1960)

Operatives
Clerical Workers
Craftsmen, Foremen
Professional, Technical
Sales Workers
Service Workers
Managers, Officials, Proprietors
Laborers, Including Farm Laborers

C. Expected Needs

There will be continued growth in the durable goods industries, but at a somewhat slow rate. Nondurable goods industries will show little growth except in chemicals.

Construction should grow at or faster than the present rate.

The service industry should continue to be very fast growing.

Government employment, especially State and local, should continue its rapid rise.

There should be continued high-level gains in finance, insurance and real estate.

Trade should increase slightly.

Employment in transportation, communication and public utilities should grow, but rather slowly.

Suffolk Area Study

The following courses (with labor force and annual need data-1961) recommended for Area Centers by the Suffolk Area Study suggests the region's employment needs:

Course Title	Labor Force	Annual Need
Agriculture Supply and Equipment Technology	364	29
Appliance Maintenance and Repair	595	70
Auto Body Maintenance and Repair	454	45
Auto Mechanics Maintenance and Repair	1,890	245
Aviation Mechanic	5,576	278
Beauty Culture	537	75
Building Maintenance and Repair	48,000	288
Carpentry and Cabinetmaking	3,869	193
Commercial Art	120	20
Electrical Trades	4,300	215
Electronics, Technical	5,910	110
Fishery Technology	-----	20
Food Preparation and Service	1,556	170
General Industrial	20,205	120
Lithographic Technology and Printing Crafts	604	30
Machine Tool Occupations	2,778	301
Masonry	1,328	80
Materials Control Technology	1,420	86
Medical and Dental Technology	285	51
Painting and Decorating	979	98
Plumbing and Heating	1,686	269
Practical Nursing	498	158
Sheet Metal Fabrication	1,156	120
Textile Fabrication	2,815	1,000
Tool and Die Technology	917	124

Westchester Area Study

A. Predominant Types of Industrial Employment in Rank Order (1962)

1. Manufacturing
2. Retail Trade
3. Service Industries
4. Wholesale Trade
5. Transportation, Communication and Utilities
6. Contract Construction
7. Finance, Real Estate, and Insurance
8. Agricultural Services

B. Expected Needs in Terms of New Workers Needed Annually, 1965-1975, in Rank Order

1. Professional-Technical
2. Clerical
3. Skilled
4. Managerial
5. Unskilled
6. Sales
7. Semi-Skilled

C. Vocational Course Choices of Employers

Written and Oral English (related to trade and technical subjects)
Basis Mathematics " " " " " "
Business Training
Machine Shop
Metal Shop
Drafting and Blueprint Reading
Retail Selling
Mechanical Technology
Electronic Technology
Garment Trades
Auto Mechanics
Sheet Metal
Industrial Chemistry
Printing
Beauty Culture
Food Trades
Gas and Electric Welding
Jewelry Making
Paper Hanging
Instrumentation
Practical Nursing

General Outlook for New York State to 1970

(Adapted from Monroe County Study)

1. There will be a continued rapid growth in the white-collar group, especially in professional and technical occupations.

2. There will be continued substantial gains in clerical and sales occupations, especially where public contact is involved.

3. In the manual occupations only the skilled groups are expected to expand at a rate at least as rapid as total employment.

4. Semi-skilled jobs should continue to increase but not as rapidly as total employment; thus, their relative position in the labor force will decline.

5. Little change is expected in the number of unskilled workers but their proportion in the labor force will drop.

6. There will be a faster than average growth among service workers.

7. There will be a further decline in the number of farmers and farm workers.

Conclusion

Based upon this brief survey of industry and employment in the various county area studies, we can conclude that virtually all of the foreseeable occupational trends for the rest of the decade point to a continuing shift in the demand for labor. The direction of this demand is clearly for workers with more education, training and skill.

X. SKILLS AND ATTITUDES MOST NEEDED TO QUALIFY APPLICANTS FOR EMPLOYMENT AS SEEN BY EMPLOYERS

The need for education will be a lifelong concern for most workers. Fundamental education in the basic academic skills and attitudes must be broad enough and effective enough to equip the individual so that any transitions he may have to make during the course of his lifetime can be accomplished with a minimum amount of dislocation. It may be necessary for many workers to shift occupational gears several times in their working lives as demands of the labor market change. In addition to fundamental academic education, education in specific skills should be available prior to and throughout the working life of the individual.

The great need for basic academic skills is reflected by the general agreement found among employers in asserting that public school should emphasize such skills as reading, writing, spelling and mathematics. Similar unanimity among employers was found in their desire to have schools develop appropriate work habits and attitudes. A listing of the most frequently mentioned attitudes employers would like to have encouraged included the following:

1. Ability to accept responsibility
2. Ability to work with others
3. Greater initiative
4. Pride in accomplishment
5. Courteous behavior
6. Orderly work habits
7. Desire to learn

A summary of the major deficiencies employers found in job applicants further indicates the stress employers put on the need for schools to encourage suitable work habits and attitudes:

1. Poor attitude (lack of ambition, initiative, pride in work, responsibility, interest)

2. Poor work habits

3. Lack of appreciation for business economics (businesses are set up to make a profit, not to provide security as such to the individual)

4. Lack of ability to spell, read, write, express oneself and do simple arithmetic

5. Lack of experience

6. Lack of specialized education

There was far less agreement as to what subject fields the vocational-education program should cover since those who suggested skill training in high school represented as wide a range of occupations as their individual businesses. However, the following occupational skill categories were singled out by three or more of the 24 multiple-county surveys as being particularly in demand by employers:

1. Agriculture*
2. Building Industries Occupations
3. Business Training
4. Custodial and Maintenance Service Occupations
5. Distributive Occupations
6. Drafting Industries Occupations
7. Electrical Industries Occupations
8. Food Industries Occupations
9. Chemical Industries Occupations
10. Machine, Metal and Mechanical Industries Occupations
11. Plumbing and Heating Industries Occupations
12. Practical Nursing
13. Printing Industries Occupations
14. Textile Industries Occupations

In three of the multicounty surveys there was a real need to expand existing vocational agricultural courses to meet current and future employment openings in agriculture.

Types of training preferred by many farm employers include the following:

1. Animal and Poultry Production
2. Building Maintenance
3. Crop Production, Harvest and Storage
4. Field Machinery Operation
5. Flower Crop Production**
6. Milking Machine Operation
7. Milk Machinery Maintenance
8. Agricultural Mechanics
9. Farm Management and Agricultural Economics

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*Although farm production continues to increase, fewer and fewer personnel are needed for farm operations. This situation is possible because of the application of economics and scientific advances (technological and mechanical) to farm management. As a result, there is a need for greater technical knowledge and higher skills on the part of those who intend to enter, or continue, the vocation of agriculture and related businesses.

**The trend on Long Island (Nassau) is from agriculture per se to specializing in ornamental horticulture, floriculture, landscaping, packaging and selling such products.

XI. APPRENTICESHIP AND COOPERATIVE SCHOOL-WORK PROGRAMS

At the present time apprenticeship training and cooperative school-work programs are very limited. Thirteen of the survey studies indicated either a very modest program meeting the minimum needs of the local communities or a minute interest on the part of employers and employees in setting up such a program. Eleven surveys made little or no mention of an apprenticeship or cooperative work-study program. However, with increasing interest on the national level, considerable attention needs to be directed to apprentice skill and related instruction. Similarly, cooperative school-work programs should be expanded within the concept of a total educational program.

XII. SUPPORT FOR OCCUPATIONAL EDUCATION

"THERE IS NOTHING PERMANENT BUT CHANGE" . . . Heraclitus

The pattern of national and local change has been mirrored in the socioeconomic structures of the areas studied. There is positive indication that the commercial growth of the individual areas and of the State as a whole will continue during the coming years.

The school populations have already shown notable growth and will expand further. The incidence of pupil population increase now appears to be in the upper or secondary grades. Thus we may expect many more youth to be ready to enter the job market even if a larger percentage of them continue into higher education.

The increasing mechanization and automation of business, distribution, industry and agriculture demand far more vocational-technical and general education. At present many youth who enter direct employment have had little or no specialized occupational preparation.

No particular occupational specialization pattern meets the needs for every regional area; rather, education for a number of occupational clusters of job titles is required to develop a basic preparation for initial employment for youth. In support of this general belief are many people who are school administrators, members of school boards, parents, youth, industry, labor and management. And since each school system, on its own, generally cannot afford to support the competent faculty and specialized facilities demanded of today's technological and industrial training, the aforesaid groups all recognize the need for a new approach to provide the necessary training.

The need and support for some type of increased occupational education is statewide as evidenced by the following four illustrative reports based on a representative sample in New York State.

Elmira Area

1. The last 10 years evidenced a 13.77 percent growth in population, and all indications are that this growth will continue.
2. The greatest increase in population will be in the (a) under 18-year-old group and the (b) young adult group.
3. The projected enrollment in high school will be over 6,000 students by 1971.
4. Approximately 25 percent of the population is of school age.
5. Seventy-five percent of the firms responding to the survey said a good local vocational-technical training program could supply their needs.

Elmira Area (cont'd.)

6. A substantial majority of voters, with and without children in school, were in favor of tax-supported programs.

7. Only 10 percent of the voters were not in favor of increased occupational training if it meant a tax increase.

8. Parents expressed willingness for children to travel from 10 to 25 miles in order that they might participate in a vocational-technical program.

9. Eighty-four percent of parents wanted expanded vocational programs for adults; only 4 percent were not in favor of such expansion.

10. Labor wanted more and better planning in occupational training.

11. Young people and parents wanted an opportunity to learn new skills and to upgrade present ones as a means of acquiring salable skills.

12. Of 3,286 students in the survey only 139 did not desire further training.

13. Seventy-five percent of the young employees surveyed would enroll in vocational courses.

14. The Manpower Development Training Program has been successful in providing some trained persons for identified shortage categories, but because of restrictive regulation, it has not met general needs in the area.

Albany Area

1. Major support for improved vocational education programs and facilities came from students not contemplating college, service industries, guidance counselors, out-of-school youth (often unemployed) and unemployed adults.

2. Business education is being provided in the school; however, urban areas are the only ones with present vocational education programs in business.

3. Most employers wanted high school graduates for initial employment. Nongraduates, if considered, must have specific skills and be adjusted to good work habits.

4. Public information about vocational-technical programs has been poor at best; consequently, parents and many employers do not understand the purposes or results of such programs.

5. Unions wanted extended training in related technology to replace some of the older skill training.

Albany Area (cont'd.)

6. There is a need for vocational training in the Albany area in order to increase employment and decrease a measurable group of out-of-school, unemployed youth as well as unemployed adults whose previous jobs have been upgraded by changing technologies.

Westchester Area

1. This area appears to be doing very well in terms of manufacturing, wholesale-retail business, and the service trades. Two hundred twenty-seven businesses were surveyed, and of this number 189 required high school graduation and a minimum age of 18 for initial employment.

2. Westchester projections indicate continued student growth, doubling present high school enrollment, and continued industrial growth, requiring even more of a vocationally prepared labor force.

3. The questions raised by the supporting groups in this area were in the nature of: "How much vocational education should be offered?" and "What locations would serve the population best?"

Tompkins Area

1. Local businesses cited their needs as including automobile mechanics, food service personnel, medical laboratory technicians, workers for the publishing industry, and appliance mechanics.

2. The interest of the students paralleled the top trade, industrial and technical curriculum offerings in the city schools around the State.

3. More and better vocational guidance was cited as a need in this area.

XIII. REPORT FROM LABOR

The interest of organized labor in the area studies has resulted in outstanding cooperation by AFL-CIO units and others concerned with organized labor within the geographic areas.

Prevalent responses on questionnaires sent to union officials indicate that there is a very strong feeling for improved vocational education. Generalizations from the questionnaires indicate that:

1. It is apparent that a large number of unions (84 percent in the multiple study region of Broome, Chenango, Delaware, Otsego, and eastern Tioga) make no provision for training, although jointly sponsored apprenticeship training is available.

2. Most labor union organizations regard vocational training as a pre-apprenticeship situation, but there are wide variations practiced within this framework. Successful completion of trade high school curriculums shorten some apprenticeships by as much as 18 months.

3. There is a degree of interest in retraining programs on the part of unions; however, most feel that the schools do it--especially in the area of post high school and adult courses, so that young people could learn new occupational skills or upgrade existing ones.

An overriding complaint is that there is poor support and communication with schools on programs and training needs. There is a need, labor feels, for school administrators to appreciate and recognize the necessity to work closely with labor. Further, there must be an uplifting of the image of vocational training and education in school systems.

Unions feel that far greater emphasis should be placed on vocational counseling. To date guidance, as such, has been academically orientated within the classic school patterns. Guidance personnel must now be made more aware of the role of vocational counseling and guidance by working more closely with industry, labor and employment services and agencies in the world of work.

The present curriculums are not extensive enough. There must be a suitable broad-based curriculum to meet the needs of all students, including vocationally orientated ones. The programs of occupational education should be sequentially planned.

The existing facilities must be upgraded and updated. Much equipment and many facilities are obsolete. The lack of funds for new equipment in trade, industrial and technical fields accounts for reduced quality training. There is an urgent need to update teachers with new materials, production techniques, and skills.

XIV. DROPOUTS

Much has been written and said about the dropout. Phrases such as, "stay in school," "youth unemployment grows," "nation needs more skilled manpower" have emphasized the current concern in the nation, the State, and the counties on the loss of human potentialities and the resulting chaos in terms of "displaced" young people, who, being untutored, are unable to compete in contemporary society.

This section identifies dropout programs as reported by communities, students, and parents. Questions and answers are suggested as clues to alleviating the dropout problem in New York State.

Questions to be considered in this section of the report are:

1. Is the existing curriculum a cause of dropouts?
2. Would new curricula in occupational education be an answer to the dropout problem?
3. How effective has guidance been in preventing dropouts?
4. Why do dropouts leave school?
5. What are job prospects for dropouts?

The assistance of identifiable dropouts was enlisted in the area surveys. The information they provided sheds light on their school contacts and services, their problems of transition from school to job, their work progress, and suggests ideas for change which could increase the holding power of the high schools.

It is important for one's understanding of the dropout situation to review the conclusions of research studies conducted by Federal, State and local agencies in this regard. We may then compare and contrast the multiple area analysis with earlier findings and thereby obtain new insights as to the direction vocational education must take. Common characteristics* of the dropout and potential dropout are as follows:

1. Consistent failure to achieve in school
2. Low reading ability
3. Grade level placement two or more years below average for age
4. Retention in grade at least once on the elementary level
5. Irregular attendance or frequent tardiness
6. Frequent change of schools

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*United States Department of Health, Education, and Welfare; Bulletin #26 (1964).

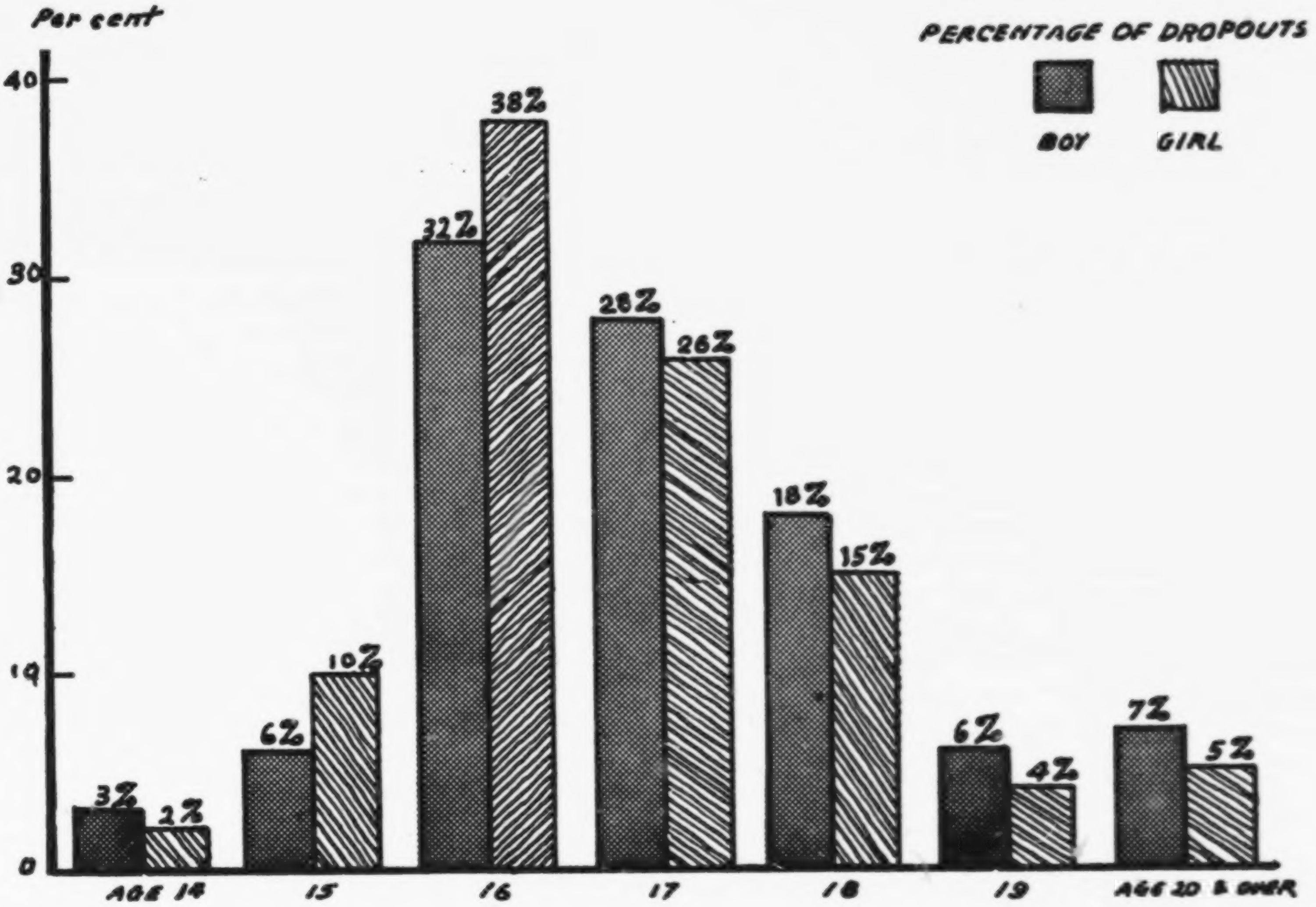
7. Refusal to participate in extra-curricular activities
8. Performance consistently below potential
9. Low level of education of many parents
10. Low family income status - income usually in trade or labor occupations
11. More frequent dropouts among boys than among girls

Related Factors:

1. Active antagonism to teachers and principals
2. Marked disinterest in school with a feeling of "not belonging"
3. Not accepted by school staff
4. Unhappy family situation
5. Marked differences from schoolmates such as in interests, social level, physique, national origin, dress, or personality development
6. Inability to afford the normal expenditures of schoolmates
7. Sibling rivalry in school situation
8. Serious emotional or physical handicaps
9. Discipline cases
10. Records of delinquency
11. Activities centered outside of school
12. Male car owners
13. Difficulties with community agencies or law
14. No personal goals
15. Negative attitude of parent toward graduation

The following charts concerning dropouts are given to illustrate the relationship between the dropout, his schooling and the work force:

AGE OF DROPOUTS WHEN THEY LEFT SCHOOL*



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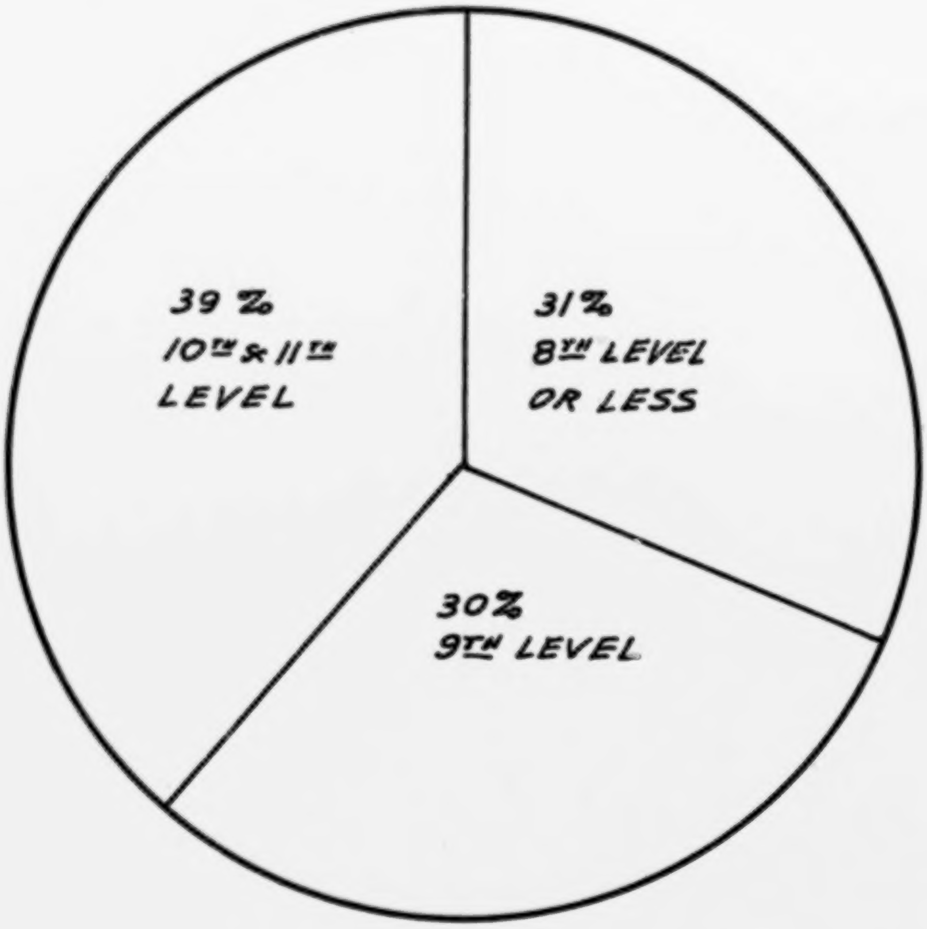
*Based on School Records; U.S. Department of Labor.

CHART: SCHOOL LEVELS OF YOUTH
LEAVING BEFORE HIGH SCHOOL GRADUATION
NATIONAL FIGURES



7.5 Million Dropouts.

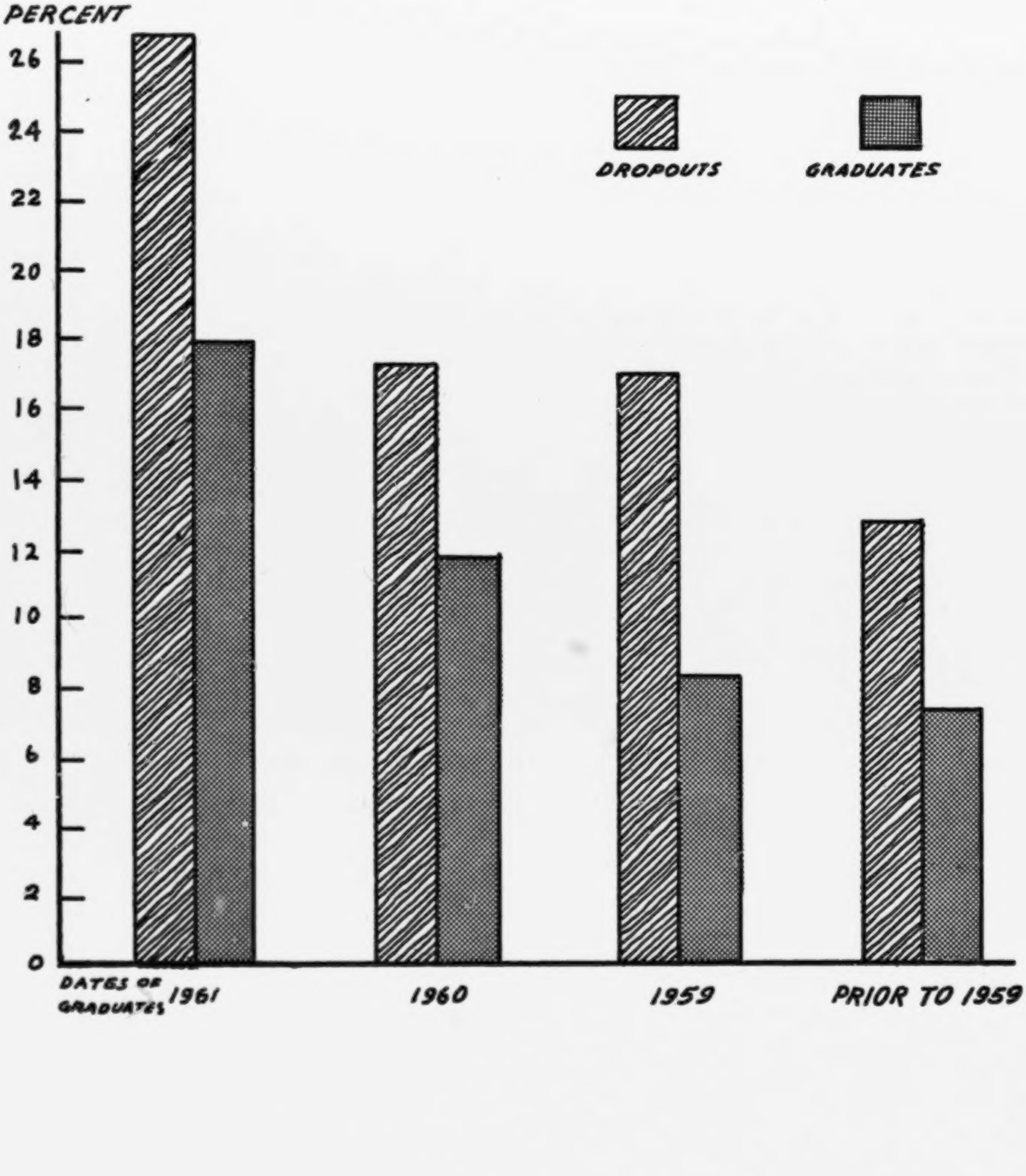
Source: U.S. Department of Labor, School Dropout.

Comment: Millions of new young workers will lack a high school education.

CHART:

UNEMPLOYMENT RATES IN OCTOBER 1962
FOR HIGH SCHOOL GRADUATES NOT ENROLLED IN HIGHER EDUCATION AND FOR DROPOUTS (AGES 16-24)

Summary: Dropouts have significantly higher rates of unemployment than high school graduates, even after several years.



Unemployment Rates of High School Graduates Not Enrolled in College by Year of High School Graduation and of School Dropouts by Last Year Attended School, by Sex, October 1961

Graduation Status & Sex (16-24 yrs)	1961	1960	1959	Prior to 1959
Both Sexes:				
High School	17.9	11.6	8.3	7.4
School Dropouts	26.8	17.2	17.0	12.7
Male:				
High School	18.5	13.9	6.8	6.3
School Dropouts	28.0	15.0	17.5	10.4
Female:				
High School	17.6	9.9	9.7	8.7
School Dropouts	Less than 100,000	22.1	16.1	17.9

In New York State the area reports are in agreement with the United States report cited either in terms of factual statements or implied in the suggested methods of solving the situation. However, it is noted that many county reports did not specify or quote statistics but surveyed the topic generally by asking dropouts a question such as the following: "What would you have liked to have taken while in school?" Of the 24 study areas, 15 did not develop a detailed section on dropouts in their reports. Of the remaining nine, the reports vary from a complete treatment of the problem to a minimum analysis.

The following is a brief overview of pertinent factors in study reports from two regional areas, as reported by the dropouts themselves. These examples are for illustrative purposes only and may be considered as indicative of the findings in some of the other counties.

Westchester

Changes in Reasons Why High School Youth Left School

Reasons	Class of 1954	Class of 1948
Lack of interest	39%	19%
Had to go to work	11	17
Not enough practical courses	27	26
Joined the Armed Services	7	5
Marriage	5	13

Reasons for Dropping Out of School

	Boys	Girls	Total
Conflict with school or students	19.3%	12.6%	15.7%
Marriage (pregnancy - 11%)	----	22.7	15.7
Financial	15.1	13.8	14.4
Lack of interest	16.6	7.5	11.6
Jobs - Boys (armed services included)	15.1	----	11.3
Jobs - Girls	----	8.0	----
Failing	13.8	8.6	11.0
Personal problems, illness	9.7	9.2	9.4
Unable to get desired courses	7.6	5.1	6.3
Miscellaneous	6.2	9.2	7.8

Monroe

Dropouts from the Class of 1962 Report their Views About High School Courses

High School Courses	Did take N-213	Would have liked N-66	Should be offered N-68
Agriculture Education	0.9	7.6	2.9
Art Education	13.6	13.6	7.4
Business-Office	24.4	21.2	13.2
Distributive Education (Sales)	3.8	9.1	20.6
Home Economic Education	16.0	3.0	5.9
Industrial Arts Education	12.2	1.5	5.9
College Prep. Education	8.5	10.6	7.4
Music Education	13.6	4.5	7.4
Technical/Scientific	1.4	7.6	14.7
Trade and Industrial Education	5.6	21.2	14.7

62% would have taken occupational rather than general education if they had the choice again.

Statewide Picture from the County Dropout Reports

Major reasons for dropping out of school can be classified into 11 general categories. They are:

1. Conflict with the school or parent
2. Marriage
3. Financial reasons
4. Lack of interest
5. Jobs
6. Armed Services
7. Failing
8. Personal problems, illness
9. Unable to get a desired course
10. Improper guidance
11. Lack of teacher interest

Dropouts are often unemployed for long periods and when able to get jobs often lose them in a relatively short span of time. Frequently, positions are of low level and unskilled. A sample of typical positions are:

1. Farm worker
2. Domestic servant
3. Building trades helper
4. Salt mine worker
5. Waitress
6. Sales clerk
7. Unskilled hospital worker
8. Gas station attendant
9. Baby sitter
10. Nursery worker
11. Laundry worker
12. Kitchen helper

DROPOUTS
FILL THE UNSKILLED JOBS

Factors which might lead to improved school experience for the potential dropout and thus improve the school's holding power for him are listed below. Although these factors are taken from the Capital District Survey, they appear to reflect the thinking of many of the dropouts contacted in the several survey areas within the State.

1. More teaching assistance and more guidance
2. Better relationships between the school and students
3. Better discipline and better teaching
4. More vocational emphasis
5. Comments on specific courses
6. More interesting or easier courses

Statewide Implications

1. Job prospects for dropouts are less than promising.
2. Potential dropouts need more and better guidance counseling.
3. A revision of the curriculum, especially in areas of occupations, appears to be necessary.
4. One objective of occupational education should be the reduction of the number of dropouts.

XV. SLOW LEARNERS AND MULTI-OCCUPATIONAL TRAINING

Today, the recognition that occupational education is important for the average as well as the advanced student sometimes tends to make us forget the less gifted student.

The concept that a trade or vocational course was the desired curriculum for the slow learner was all too popular a few years ago. The pendulum has now swung in the opposite direction, and we now see vocational-technical schools increasing entrance requirements.

Fortunately, some of the survey teams recognized the need for special tracks or courses for the slow learner. Seven survey committees suggested a track system or special program for the academically disadvantaged. Four survey groups recommended specific courses for the slow learner (e.g., building maintenance and repair, general, industrial). Three survey committees wrote a general statement on the advisability of the vocational education program in meeting the entire range of student abilities, and 10 studies failed to indicate a real position on the slow learner.

In conclusion, a majority of the survey studies are for area centers of technology and education that would serve the less gifted as well as the gifted: the curriculum should be geared to the abilities of all; specialized courses catering to slow learners must be instituted and supported.

GIVE ME

A CHANCE

XVI. THE ROLE OF TWO-YEAR COLLEGES IN AREA PLANS

There is considerable variation in the area study reports as to the extent of their investigations of the resources and long range plans for program development of the local two-year colleges. Some of the studies did not touch upon the necessary relationship between area planning at the secondary level and the local two-year colleges, while others were quite extensive in their analysis of the roles that the two-year college would play in the total program of occupational education in their region.

More recent developments in the State Education Department have resulted in a series of statewide regional meetings being conducted by the Assistant Commissioner for Occupational Education and Manpower Resources with local district superintendents and representatives within the State University of New York of the local two-year colleges. The purpose of these meetings is to indicate policy direction and develop procedures to establish a continuing mutual working relationship between the area school center and the local community college. It is conceivable that new programs of occupational education at the secondary level and the two-year college would not be considered for allocation of funds unless there is evidence of mutual planning or development between the two levels of instruction.

The following quotations are from several studies which deal with the role of two-year colleges. They indicate the need for providing for occupational education at all appropriate levels. Therefore, it is necessary to involve both area vocational centers and two-year community colleges on a continuing basis in developing a total area program of occupational education for all persons:

Albany, Rensselaer, Schenectady, Schoharie

> "Improved vocational-technical education is needed at both the high school and the post high school levels, primarily for boys."
>
> "The higher level technician programs should be the responsibility of the system of higher education, including the two-year and four-year colleges."
>
> "About 50 percent of the population falls in the mental ability range of 90 to 109. Of these, 50 to 60 percent (or 25 to 30 percent of the total) should be provided post high school technical training."
>
> "Programs for the more advanced students should be organized so that further advanced education on a post high school level would be feasible and useful to the student."
>
> "Although the courses in the proposed regional schools should range from the trade and semi-skilled craft level to quite sophisticated levels of technical skills, the major responsibility of higher level technical education should be carried out at the post high school level by the two-year community colleges."

"An increasing number of reports indicate that the comprehensive two-year college is the logical place for post high school occupational education."

"Although there are broad scale plans in New York State for expanding the two-year colleges, in the past most post high school occupational education has been the role of the secondary schools, except in the agricultural field."

"...there needs to be a major and significant expansion of programs and facilities in the four-county area at the two-year college level to provide increased training opportunities in many of the technical fields."

"It is...recommended that a drastically improved vocational guidance program be established to direct students more adequately in the courses to take while in high school, in order to prepare themselves for acceptance in the technical schools."

Broome, Chenango, Delaware, Otsego and eastern Tioga

"Regardless of the grade level at which vocational-technical education is being proposed in the high school, the plans of existing and prospective post high school education institutions such as community colleges and technical institutions, nursing schools, and business schools should be taken into account in planning high school programs in order to prevent undue duplication and overlapping."

"Employers need and want publicly provided vocational education at less than a college level (they also need and want vocational education at post high school levels in the case of technicians), but vocational education must, somehow, be concerned with attitudes toward work as well as manipulative and motor skills."

"Considerable care needs to be given to determine which programs should in fact be included within the basic 12 years of regular high school education and which programs might best be offered either in 13 or 14 years, in high school or in separate technical or community college programs."

Dutchess

"There should be no possible conflict with...(the) secondary program and present technical programs offered at the Dutchess Community College. Technical programs at the Community College could supplement some of the technical programs of an area vocational-technical center for the more able students who wish to advance their education in technology at the Community College or, even later, at an engineering college level."

"Programs of study in the Dutchess Community College do not emphasize occupational skills of a manual nature. The practical courses in this two-year college emphasize the technologies on a post high school level. Dutchess Community College and the proposed area centers would work cooperatively in the areas of vocational-technical education. Programs on the collegiate level could complement the area programs on the secondary level."

XVII. CONCEPT OF AREA CENTERS OF TECHNOLOGY AND EDUCATION

(Complexes for Occupational, Vocational and Technical Education)

A very definite need for the expansion of occupational education exists in New York State. Indicators of such a need have been referred to in preceding chapters and a few of them are listed below for purpose of review:

1. Nationwide and State trends indicate a continuing need for development of higher skill and technological knowledge competencies among the work force.

2. Statements by employers and unions in the area studies certify that persons with vocational-technical skills needed in the work force are in short supply.

3. The multiple area studies confirm that many present school programs are inadequate in providing needed salable skills.

4. Opinions by professional educators indicate that the educational system should be expanded to include, to a greater extent, occupationally related knowledge and skills training and education while in high school.

5. There are indications of strong student interest in taking vocational-technical programs related to their employment goals and the needs of industry.

6. There is substantial agreement on the part of parents with their children's choice of courses and occupations with definite expression of parents' interest in taking occupational courses.

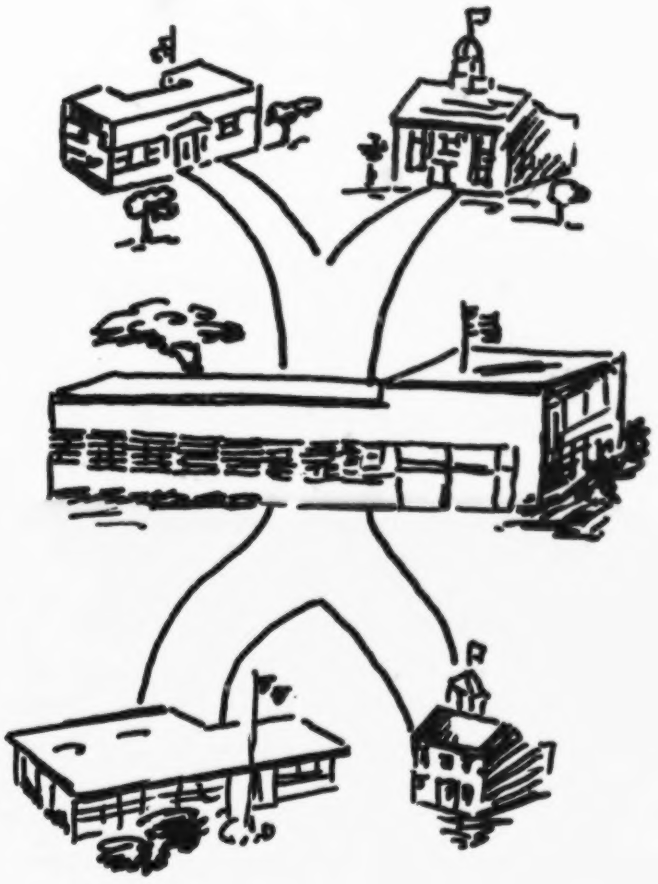
A sizeable increase in occupational training is called for in the years ahead. And with this expansion it is vital that a concept of flexibility in programs be taken into consideration. In this way, provision will be made for the wide range of abilities and needs of students and trainees at the present time and allow for future needs determined by the ever-changing job picture.

To cope most effectively and economically with the demand for a vast increase in occupational education, the separate survey areas of this report highly recommend that area centers for occupational training be established in judiciously located regions to serve wide areas of population. These centers would have facilities for training in a large number of occupational constellations in trade, industrial, technical education, and possible advanced instructional programs in business, agriculture and distributive education. They would, in effect, serve to make the local high school comprehensive by installing shops and laboratories and maintaining occupational programs of great breadth and scope so that all the interests and abilities of high school students would be utilized.

Since most school districts are not in a financial position to "comprehensiveize" their local high school programs, these area centers would serve this purpose and usually perform this function for a number of school districts simultaneously. It should be noted, that many of the studies did suggest that appropriate facilities in local high schools should be included in the operation of the area centers.

Area centers, as recommended by the various survey groups, are not intended to be full-day school or complete high schools in themselves. As a general rule students would attend their "home" schools for half of each school day and be transported to the area center for the other half for specialized instruction in an occupational field.

By bringing all the pupils interested in vocational education together in a central geographic location, it becomes economically feasible to provide an extensive program of trade and technical education.



Common determinants of what an area center should be, as suggested by the multicounty survey groups, include the following:

1. Locale of area centers should be determined by the size of school population, character of program offerings, distance, availability of sites and buildings, flexibility in planning alternate programs and upgrading existing areas, interest of area populations, and staffing requirements.

2. Actual courses to be offered must be determined in consultation with State Education Department and Center Advisory Committees.

3. Ideas must be flexible and continually adapted to the changing nature of our dynamic society.

4. Programs to be most effective must include curriculums and courses to be taught on different levels.

5. Work-study programs should be an integral part of the area center.

6. Many new facilities, including buildings, laboratories and shops must be built.

7. Specialized courses should be conducted at least in the areas of agriculture, business, trade, industrial and technical education.

8. All-day and evening centers should be open for out-of-school youth and adults.

9. Guidance specialists in occupational education should be made a part of the total school program.

OCCUPATIONAL TRAINING IN AN AREA SCHOOL